SEPTEMBER 1954

PRINTING EQUIPMENT Engineer

PLEASE ROUTE THIS COPY TO

Manager	Pressroom Foreman
Production Mgr.	Bindery Foreman
Plant Supt.	Mailing Foreman
Estimating Foreman	Maintenance Supt.
Composing Foreman	Purchasing Agt.

For filing, please return to

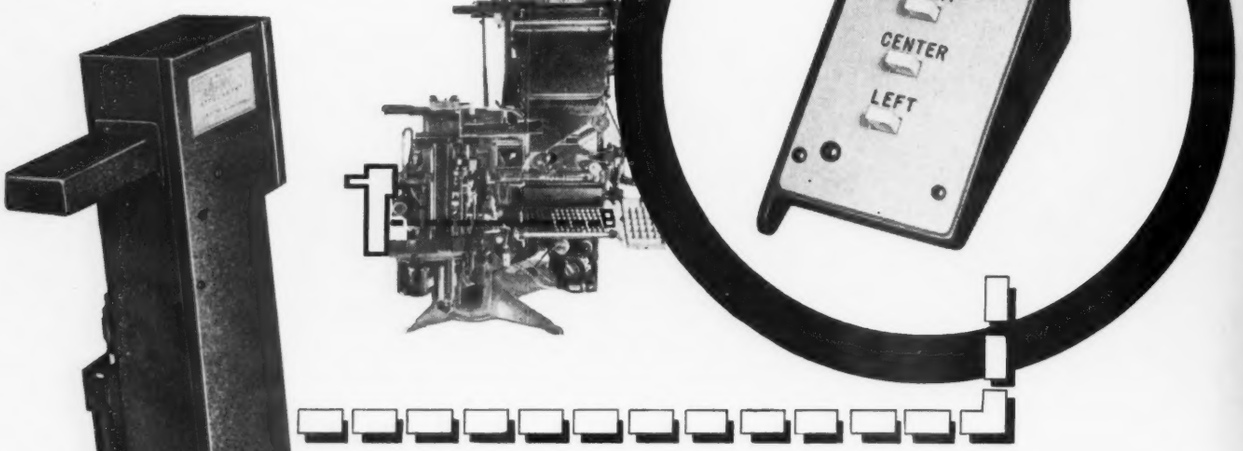
AN INDUSTRY-WIDE TECHNICAL PUBLICATION

now... the new Star

Selectro-Matic Quadder

with the "fingertip" control

Adaptable to Teletypesetter operation



- Electro push-button selector
- Operation by Teletypesetter when required
- Quads "short" lines automatically
- Single setting for odd measures
- Time proven hydraulic actuation
- Fool-proof mechanical simplicity
- Electro-pump stop safety
- Synchronizes with Mohr saw
- For Linotypes and Intertypes...

Write for full details today

Precision TRADE ★ MARK Parts

BRANCH: 1327 BROADWAY, KANSAS CITY, MO.
AGENCIES: CHICAGO • MINNEAPOLIS
LOS ANGELES • DENVER • BOSTON
CANADA: SEARS LTD. and Agents Overseas

LINOTYPE PARTS *Company, inc.*

SOUTH HACKENSACK, N. J.

IF YOU ARE PRINTING NEWSPAPER COLOR YOU NEED THIS STA-HI EQUIPMENT . . .

STA-HI MASTER ROUTER

If you are running *any* newspaper color, you need the STA-HI Master Router for routing your curved plates . . .

And if you have any *volume* of two color, three color or full color production, you should also be equipped with the rest of the highly specialized machinery that makes up STA-HI's "color combination":

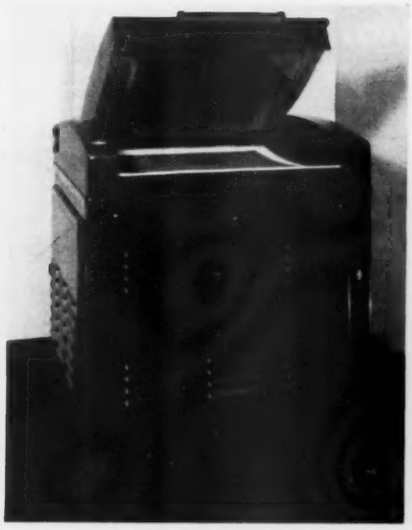
THE STA-HI MASTER MATCHER, to originate or correct register marks in all color copy and apply such register marks right in the dry mats—before plates are cast.

THE STA-HI MASTER TRIMMER, to pick up such accurate register marks and trim all mats in a color set exactly alike to assure uniform casting of color plates in close register.

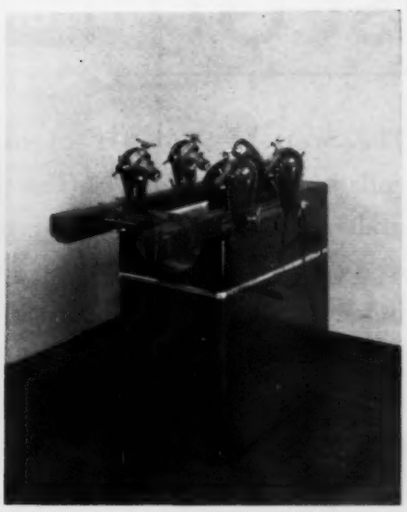
THE STA-HI VACUUM FLAT FORMER, to dry and form flat mats to assure accuracy all down the line in the color preparation process. (This machine will also prepare mats for routine flat casting.)

Write for our free brochure, "Stereotype Color Register".

STA-HI MASTER MATCHER



STA-HI VACUUM FLAT FORMER



STA-HI MASTER TRIMMER

STA-HI

...your best buy

STA-HI CORPORATION, BOX 152, WHITTIER, CALIFORNIA

Can Any Publisher Afford an Obsolete Composing Room?

SCOTT Ideal Matrix Rolling Machines

The Scott Ideal Matrix Moulding Machine rolls any kind of matrix. The form is started under the upper cylinder by the application of a crossed belt drive which permits the cylinder to vary its surface speed between 1″ and 1¼″ without slippage. This drive allows the upper cylinder to find its own float without strain on the matrix. Powerful rolling mill effect and straight line pressure assures easy operation.

With the Scott free moulding cylinders all imperfections are eliminated, thus producing sharp, full depth rolled mats free from mechanical buckling.

Your inquiry regarding these Scott Ideal Matrix Machines is invited.

Buy with Confidence . . . Buy **SCOTT**

15-L-15

WALTER SCOTT & CO. INC.

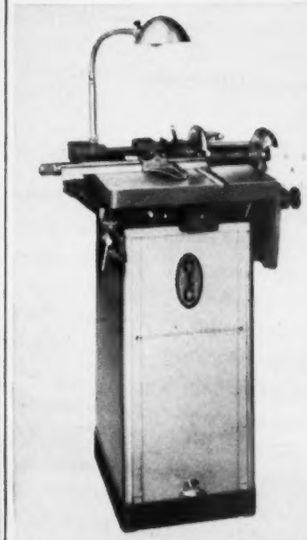
PLAINFIELD, NEW JERSEY

THESE NEWSPAPERS KNOW HOW TO CUT COMPOSING ROOM COSTS

with MORRISON SAW TRIMMERS

Most versatile and profitable time-saving

Mac --
Looks like most of the leading newspapers are using Morrison Saw Trimmers -- and most of them have at least one saw for every two ad frames -- they all have Morrison Slug Strippers too. Take a look at this list.... Al



MORRISON 3-A SAW TRIMMER

Most versatile and profitable time-and-money-saver in any composing room, Model 3-A is designed for improved visibility, greater safety, precision accuracy and easier handling, long life and low maintenance. Just check the features and you'll know why — popular "behind the gauge" work-holder, 73-pica gauge, 135-pica extenion gauge, miter and line-up gauge, right and left hand miter vise, saw grinder, trimmer grinder, and other De Luxe equipment.

Write for catalog on Model 3-A Saw Trimmers—as well as Morrison Slug Stripper, Plate Beveler, Router and Type High Planer, Strip Material Cabinets, Waste Receptacles, Universal Saw Blades, Router Bits, and Jigsaw Blades.

NEWSPAPER	NO. OF MORRISON SAW TRIMMERS
Buffalo Evening News	12
Buffalo Courier Express	10
Chicago Daily News	20
Chicago Herald American	13
Chicago Sun Times	15
Cincinnati Enquirer	10
Cincinnati Post	6
Cincinnati Times Star	9
Cleveland Plain Dealer	14
Cleveland Press	7
Columbus Dispatch	13
Dallas News	11
Dallas Times Herald	11
Detroit Free Press	5
Detroit News	20
Detroit Times	7
Denver Rocky Mountain News	5
Dubuque Telegraph Herald	8
Fort Wayne Newspapers	11
Fort Worth Star Telegram	8
Great Falls Tribune	7
Hartford Courant	4
Houston Chronicle	9
Houston Post	11
Indianapolis Newspapers	11
Kansas City Star	13
Little Rock Arkansas Democrat	6
Los Angeles Examiner	4
Memphis Commercial Appeal	4
Miami Daily News	5
Milwaukee Journal	26
Nashville Banner and Tennessean	9
New Haven Register	5
New Orleans Times Picayune	13
New York Herald Tribune	5
New York Times	23
New York World Telegram	11
Oklahoma City Oklahoman	5
Orlando Sentinel Star	9
Philadelphia Inquirer	6
Pittsburgh Press	13
St. Louis Globe Democrat	14
St. Louis Post Dispatch	14
San Diego Union Tribune	7
South Bend Tribune	8
Tulsa World & Tribune	5
Washington D. C. Daily News	5

Symbol of Operating Economy

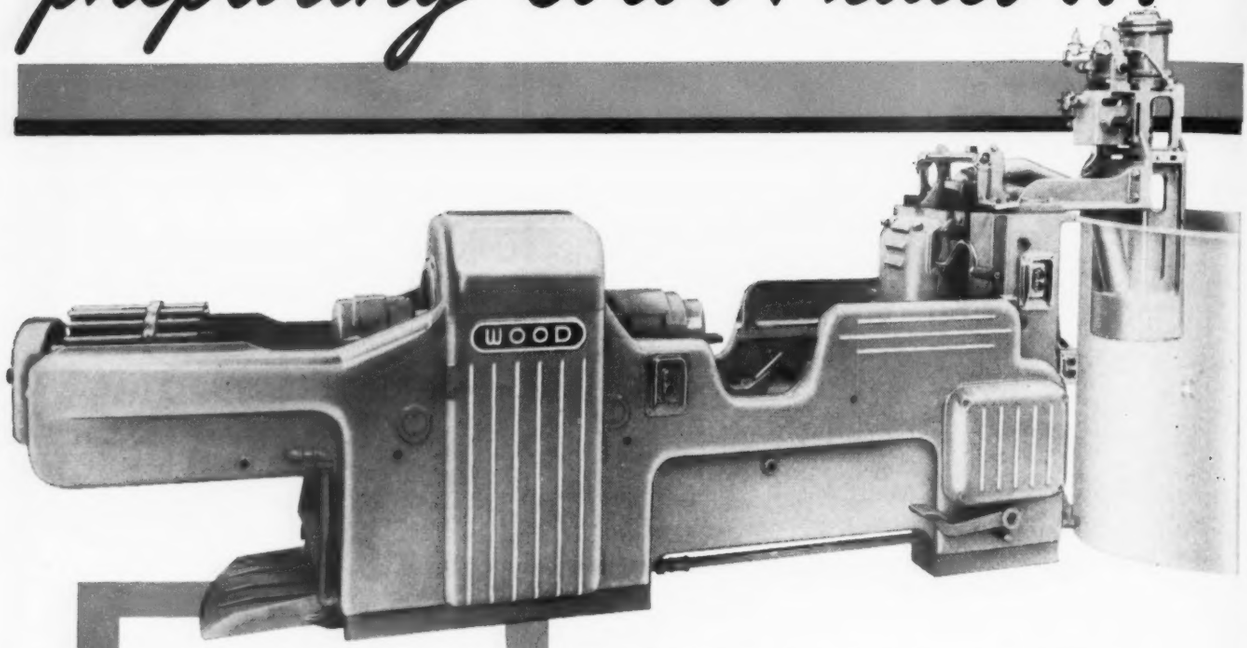
THE MORRISON COMPANY MILWAUKEE WIS.

THE Morrison COMPANY

PRECISION MACHINES FOR THE GRAPHIC ARTS INDUSTRY

125 W. Melvina Street, Milwaukee 12, Wisconsin

The Ideal Combination for preparing Color Plates...



The NEW Heavy Duty Pony Autoplate Machine

Color Plate Pre-Registering Machine

Today's ROP color can be no better than the plates from which it is printed. These two modern machines, when used as a team, provide an improved means of preparing better, more accurate color plates with fast, close register.

The first member of the team is the NEW Heavy Duty Pony Autoplate Machine. Improved features assure the production of stereotype plates which are more uniform and denser, at a maximum rate of three plates every two minutes.

The second member of the team, the Color Plate Pre-Registering Machine, provides fast, very close register of two, three or four color plates, and detects inaccuracies prior to the plate being placed on the press. Send for literature describing the NEW Heavy Duty Pony Autoplate and the Color Plate Pre-Registering Machine.

IF IT'S Wood IT'S GOOD

WOOD NEWSPAPER MACHINERY CORPORATION

PLAINFIELD, NEW JERSEY

EXECUTIVE AND SALES OFFICE: 501 FIFTH AVENUE, NEW YORK 17, N. Y.

PRINTING EQUIPMENT Engineer

September 1954

An industry-wide technical magazine published especially for management, production and mechanical executives responsible for printing production and the specification of equipment and supplies used in the commercial, magazine, private plant and daily newspaper fields.

CONTENTS

Blame for Loss of Letterpress Business 39
By RICHARD W. GARDNER

New Rotofilm for Replacement of Carbon Tissue in Gravure Process 40
By AXEL LUNDBYE

Phototypesetting at Warwick Plant 42

Craftsmen Study Technical Problems 43
- Wet or Dry Offset?, 46
- Photocomposition Usage Related, 47
- Letterpress Pressroom Operation, 50
- All Printers Told: "Stick to Own Last" at Silk Screen Clinic, 52
- RCA Color Corrector Progress, 52
- Flexography—What It Is and How It Is Done, 54

Flexographic Printing Plates 54
By WALDO E. BASS

Flexographic Press Design Explained 56
By ROBERT ZUCKERMAN

The ABC of Offset, Series Two—XXII 58
By GEORGE JOS. LENZER

Blocking Material Developed by PER 62
By HOMER L. GREEN

Precision Magnesium Plates—Precision Curving Surface 64

Patents for the Graphic Arts 65

Southwestern Graphic Arts Expo 67

Recent Equipment Reports 69

Conference Dates 79

News Items 82

Equipment and Supplies 6
- New Morrison Slug Strippers, 6
- ArrowToners Specimen Book, 6
- Chec-All Dial Measuring Instrument, 8
- Selectro-Matic Quadding Attachment, 8
- Vacuum Printing Frame and O-L-S Table, 12
- Ground Control Eliminates Explosion Hazards, 14
- Ink Agitator for Verticals, 14
- Improved Wire Binding, 26
- Fractional Horsepower Motors, 26
- Remelting Equipment Catalog, 26
- Single Belt Drive Curved Plate Router, 30
- Spherekote Tympan Booklet, 30
- Miniature Lubricating System, 30
- Pre-sensitized Grained Offset Plate, 37
- Plate Coating Bulletin, 60
- 24 k. Gold Leaf, 60
- Carbon Tissue Transfer Machine, 63
- Ultron Vinyl Sheets, 64
- Layout-Stripping-Lineup Table, 69
- Transparent Indexing Tabs, 70
- Three Grades of Coated Papers, 70
- Hydraquadder Hydraulic Quadder, 72
- Filius Offset Press, 81

Advertisers' Index 88

Volume 84 **Number 12**

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Printed in U. S. A.

AN INDUSTRY-WIDE TECHNICAL MAGAZINE

STYLIZED COVER DESIGN DRAMATIZES PROGRESSIVE THINKING OF COORS BREWERY

You see here the striking cover design of a portfolio of advertising helps – menus, menu sheets, napkins, place mats, etc. – which Coors representatives leave with retailers. Each portfolio is personalized with the name of the retailer who gets it, and also with the name of the representative who gives it to him.

This unique cover was designed by Bill G. Moomey, Coors art director. Feeling that a great deal of beer advertising art is regrettably old-fashioned, Mr. Moomey strove to achieve a clean, contemporary look that would suggest the progressive thinking and modern attitudes of this fast-growing brewery. We think he succeeded beautifully.

We are proud that Buckeye Cover was chosen for this unusual cover. The printer of the piece – Bradford-Robinson Printing Company, Denver – writes us "that Buckeye Cover was chosen for its good lithographing and folding qualities."

If you are planning a portfolio, catalogue, annual report, brochure, or other fine printed piece, remember that the selection of the cover not only as to design but as to quality and texture of the paper itself is of major importance.

There's a world of inspiration for the creative man in the wide range of colors and finishes in the Buckeye Cover line. Complete sample book will be sent on request to any cover paper user.

BUCKEYE - BECKETT PAPERS

THE BECKETT PAPER COMPANY

MAKERS OF GOOD PAPER IN HAMILTON, OHIO, SINCE 1848

Equipment and *Supplies*

If you wish additional information concerning equipment, supplies and/or technical literature, please make your request to PRINTING EQUIPMENT Engineer, 1276 West Third St., Cleveland 13, O.

New Morrison Slug Strippers

A Bench-Type Slug Stripper plus redesign of its present Cabinet Model Slug Stripper, has been announced by the Morrison Company. The Bench Model,

according to Pres. George Morrison, is designed for use by smaller plants, as well as auxiliary equipment for shops already owning the larger cabinet model. The Slug Stripper cuts letter characters from linecomposing and Ludlow slugs, Monotype or foundry cast type, strip cast rules and borders to any height such as 16 gauge (0.065 in. thick) for metal mounted photoengravings, 0.105 in. and 0.152 in. thick for electrotypes, or 0.152 in. thick for shell stereotype casts. The stripped slug can be secured with cement, two-side adhesive tape, or tacked into place on the base. Inserting angle lines of type, key numbers, price changes, lines set into mortises, and other changes can be made without mortising the base. The Morrison Bench Model Slug Stripper base is 11 in. by 19 in. A ¼ h.p. 115 v., 60 cy. single phase motor is provided. All working parts are identical and interchangeable with the cabinet model. Please mention PEE No. 265 when requesting further information.

ArrowToners Specimen Book

ArrowToners is the title of a newspaper color ink specimen book published by Howard Flint Ink Co. The inks are intended for high speed newspaper color printing. These inks can be used straight or mixed with one another to produce an endless selection of any and all shades desired by advertisers or editors. Included are three and four color showings of ANPA-AAAA approved process colors.

(Continued on Page 8)

Ludlow Tempo Black Condensed

Here is the newest member of the growing Ludlow Tempo family —a condensed letter for you to use with other members of the popular Tempo family. Examples of everyday advertising display and grocery composition shown in the folder illustrated below show how Ludlow Tempo Black Condensed can be put right to work in your composing room.

Send for your copy of this new Ludlow typeface folder today

Ludlow Tempo Black Condensed is amazingly useful wherever boldness and emphasis are desired. It packs a real punch in grocery advertising and sales circulars. Tempo Black Condensed is an outstanding typeface for department store and specialty shop display. It is also an excellent letter for publication feature heads and advertising display and for a great variety of commercial printing. The folder shows how and why—send for your copy.

Free . . . We will also send you two recent prize-winning folders on new Ludlow typefaces entitled Ludlow Record Gothic Condensed and Ludlow Typefaces.

Ludlow Typograph Company 2032 Clybourn Avenue, Chicago 14

Set in members of the Ludlow Tempo family

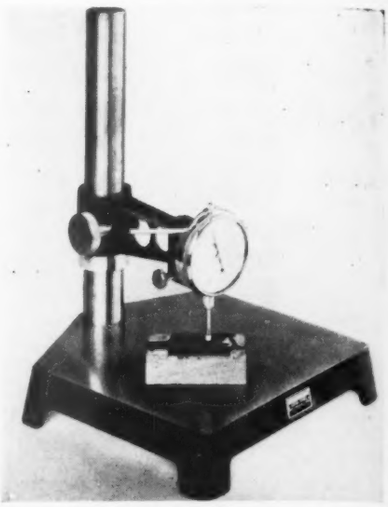
Equipment & Supplies

(Continued from Page 6)

Flint announces that if the newspaper pressroom wants to mix its own inks, matching colors is easy with ArrowToners. The company also advises that a chart is provided for this purpose and the use of Arrowhead White No. E-9655 will assure results, or the mixing can be done by the Howard Flint Ink Co. Besides solids, each color is shown in one-fourth, one-half and three-quarter halftone values. The book measures 8¾ in. by 11¼ in. and is process bound for easy leafing of the newsprint specimen sheets. A copy of the ArrowToners Ink Specimen Book will be sent upon request. Please mention PEE No. 235.

Chec-All Dial Measuring Instrument

Chec-All Dial Measuring Instrument, sponsored by Acra-Chec Company, is substantially mounted for bench use. Type, slugs, plates, mats, press blankets and paper may be measured. The 2 in. dial is direct reading and is graduated in 0.001 in. divisions. A vernier dial indicates accumulated measurements. Thicknesses up to 1 in. may be measured. Readings are uniformly accurate because a pre-determined spring contact pressure is provided independent of the operator's feel. A special contact point is provided for determining depths of routed, molded, cast and etched areas (other than halftones) in original engraving, electro and



plastic plates and for type and flat or curved mats. Further information will be furnished; please mention PEE No. 258 when writing.

Selectro-Matic Quadding Attachment for Linecasting Machines

A new model of the Star Quadding Attachment for linecasting machines has been announced by Linotype Parts Co., Inc. For manual or tape keyboard operation, the Selectro-Matic Quadding Attachment is hydraulically actuated as in previous models. It can be applied to any 30 pica linecasting machine. New developments include pushbutton controls attached to the machine keyboard, solenoid actuation of the rack and gear train, a memory system, and provision for automatically quadding short lines to the left, right or center.

The Selectro-Matic control box permits selection of quadder functions when the operator moves his right hand to the control box at the right side of the keyboard. Indicator lights at the top of

For outboard application to any 30 pica linecasting machine, Linotype Parts Co., Inc., has announced development of the Selectro-Matic Star Quadder.

the control box show when the quadder is in operation, and whether a line has been cast. A toggle switch (also on the control box) can be snapped off to pre-

(Continued on Page 12)

the new 17 Miehle LITHOPRINT

The Lithoprint is designed to accommodate small short run jobs many of which are now being produced in offices on duplicating equipment. Letterheads, business forms, price lists and catalog sheets, flyers and throw-aways, bulletins, house organs, etc., can now be printed in record time. Engineered and built to produce this kind of work, the Miehle 17 Lithoprint will turn out clean sharp images in line or halftone, black and white or color. Simplified operating controls, lightning-fast plate mounting and easy adjustments enable the operator to switch from job to job quickly.

- PULL-OUT INK FOUNTAIN
- POSITIVE FEEDER
- ACCURATE REGISTER
- FAST PLATE CHANGE
- SIMPLIFIED CONTROL PANEL

Sheet Size 14 x 20"
Design Size 13 x 17¼"
Speeds up to 5000

THE MIEHLE-FOUNT This revolutionary water control system eliminates dampening rollers. Ink rollers simultaneously supply ink and moisture to the plate in correct proportions to insure proper printing conditions.

Don't delay! Send for the folder which describes this newest member of the Miehle Offset Family.

MIEHLE PRINTING PRESS AND MANUFACTURING COMPANY
Chicago 8, Illinois

ace rocket rollers for your jobbers
synthox rollers for your flatbeds and rotary presses
process rollers for your flatbeds and rotaries
masterlith vulcanized oil rollers for your lithographic presses
lithecraft synthetic rubber rollers for your lithographic presses
greytone lithographic rollers—newest lithographic roller on the market
mechanical rollers for your corrugated presses
aniline rollers for your flexographic presses
waxing roller for your packaging lines
IDEAL ROLLERS DESIGNED FOR CRAFTSMEN IN THE GRAPHIC ARTS FIELD
These are the rollers you have helped us to develop through your requests and guidance.
Ideal
ROLLER & MANUFACTURING CO.
THREE FINE FACTORIES
Long Island City 1, N. Y.
Chicago 8, Illinois
Huntington Park, Cal.

HERE...OF ALL PLACES

Keep it simple–Keep it sturdy

KEEP IT CUTLER-HAMMER

CUTLER-HAMMER
MOTOR CONTROL
C-H

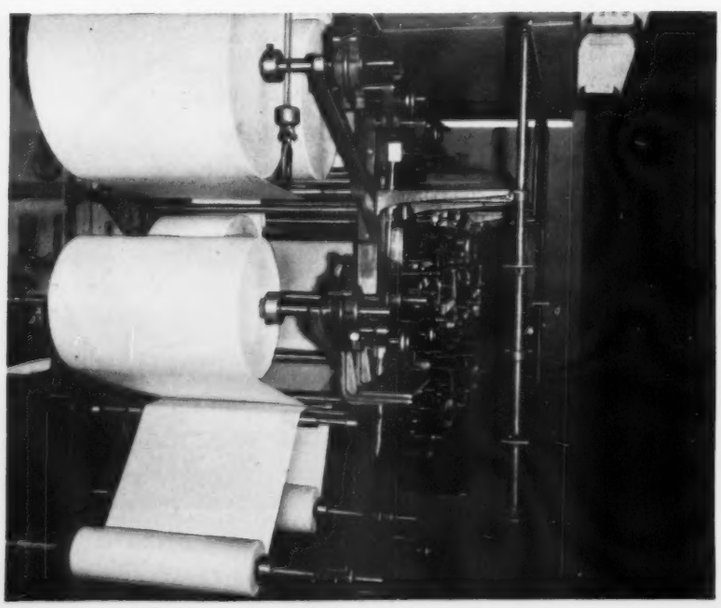
If there is any place in the world where equipment should be simple and sturdy—each segment to be completely depended on to perform its assigned role, that place is in the complexities of the modern newspaper pressroom. And as publishers learn of the marvelous job that Cutler-Hammer unit drive installations are doing, more and more of them turn to Cutler-Hammer Control for that same simple, sturdy, trouble-free equipment and dependable performance.

The story on the Cutler-Hammer unit press drive control is this: Paired with simple, sturdy, a.c. wound rotor *unit* motors are Cutler-Hammer unit controls embodying simple, sturdy industrial control designs that every plant electrician knows and can *understandingly* service.

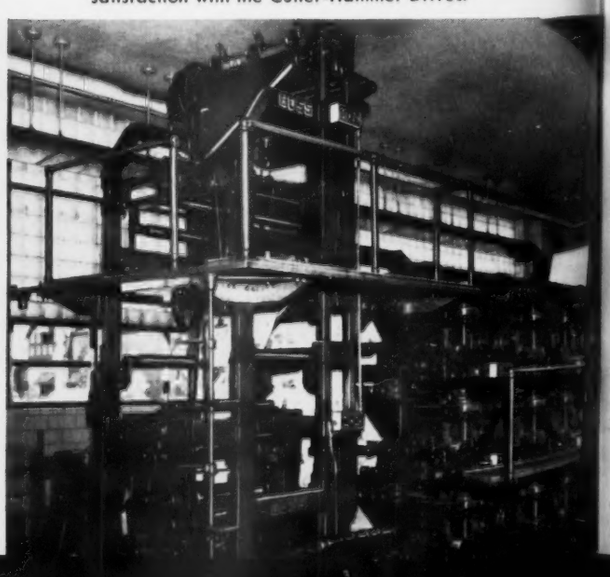
From this dependable combination you get every possible function you can require. But you get it *simply*—without headaches and without heartaches. Inching, threading, satin-smooth acceleration, high efficiencies all the way up! *REAL* synchronization of unit motors, flexibility . . . and blessed freedom from trouble.

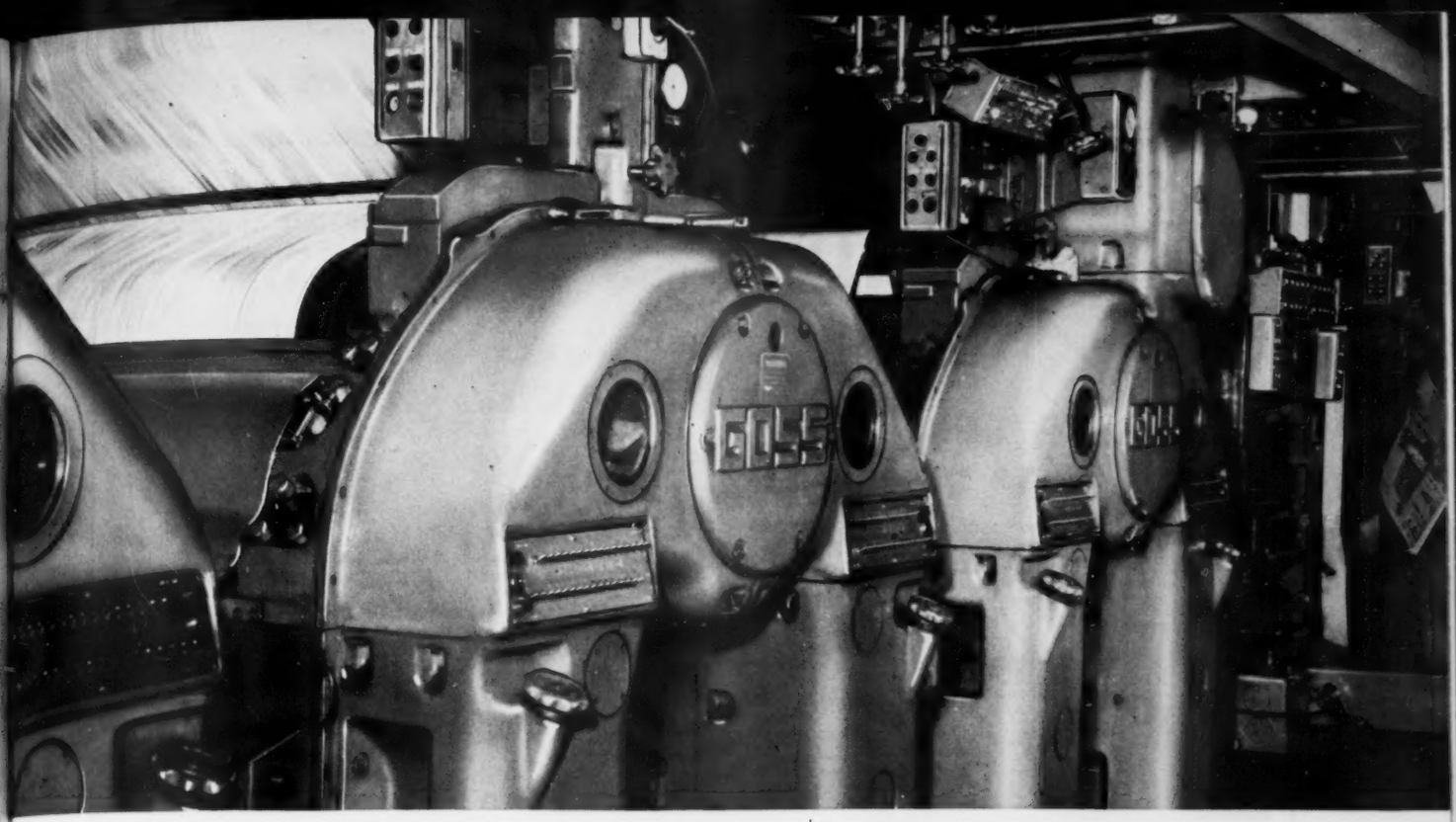
Details? Take a look at the C-H cam drum accelerator with 87 speed points. Note that inching and threading *DON'T* draw current through the battery of unit motors. No changing load adjusting resistor switches. No unbalanced loads. No circulating currents or excessive peaks. *Your* electrician can service this drive and he can service this control. Get these facts and many more from the Cutler-Hammer engineering representative.

CUTLER-HAMMER, Inc.
1460 St. Paul Ave.
Milwaukee 1, Wisconsin

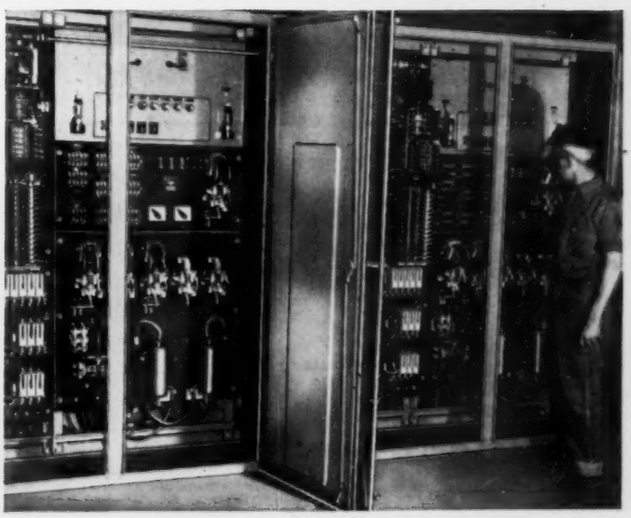


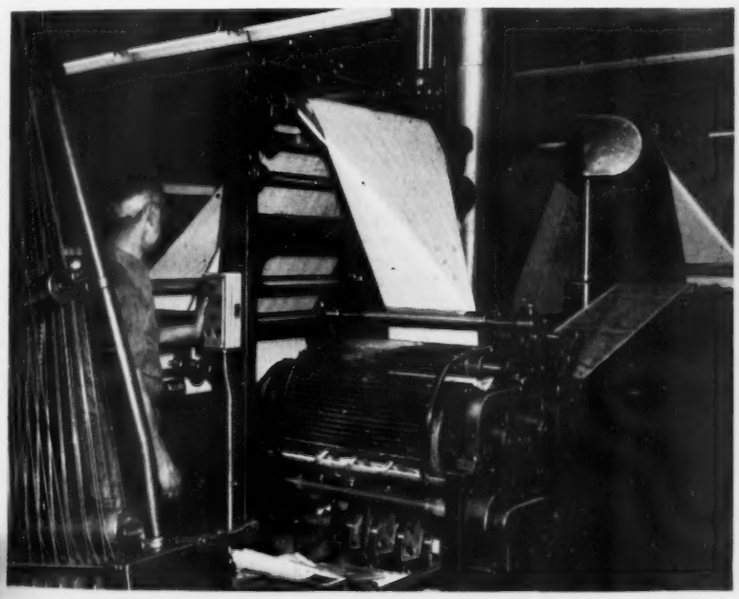
Cutler-Hammer 2 Motor Drives serve many color plants as well as local dailies such as:
APPLETON POST-CRESCENT and THE REPORTER-TELEGRAM of Midland, Texas
Production executives of these papers report complete satisfaction with the Cutler-Hammer Drives.





Cutler-Hammer Unit Control on Goss Headliner Press in
LARGE SOUTHERN DAILY
This installation consists of 12 Headliner Units with three folders, reel-tension-paster units and 6 special color cylinders. It runs consistently at 44 to 48 thousand newspapers per hour.





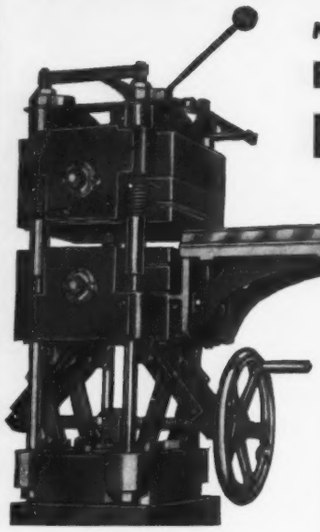
Cutler-Hammer. Electronic Control for single motor drive serves each of these two Goss Tubular Presses at
THE STAR-BEACON, Ashtabula, Ohio
Mr. Howard Healy, Production Manager, says:
"Cutler-Hammer Controls give us perfect synchronization between these two presses. We are well satisfied. . . ."

CUTLER-HAMMER
WEB BREAK DETECTORS
Stop press instantly if web breaks. Web can be rethreaded without latching detectors. Easy to mount.

CUTLER-HAMMER
WEB SEVERING DEVICE
A Cutler-Hammer "original" that has resulted in greater total savings than any other single accessory. It instantly slashes broken web close to impression and guards against destructive wrap-arounds and costly delays—resets automatically.

CUTLER-HAMMER
MOTOR CONTROL
C-H

CUT COSTS — PRINT WITH
RUBBER PLATES
MAKE THEM IN THE
EASY-TO-OPERATE
EVA-PRESS



Materials Cost Less Than $1.25 For 10"x10" Plate

1. Insert type form and plastic sheet into hot Eva-Press, apply pressure, let cure for 10 minutes.

2. Release pressure, extract all from Eva-Press and have finished matrix.

3. Place (1) sheet of rubber on (2) matrix and insert both into hot Eva-Press, apply pressure, let vulcanize for 10 minutes.

4. Release pressure, extract all from Eva-Press and have finished Rubber Plate. More detailed directions supplied with Eva-Press.

• PLATENS 11"x13"
• INSIDE CHASE 10"x12"

FOR MORE INFORMATION WRITE TO
AMERICAN EVATYPE CORPORATION
743 OSTERMAN AVE. DEERFIELD, ILLINOIS

New England Newspaper Supply Co.
Consolidated with
New England Fibre Blanket Co.
"The Oldest Name in Press Blankets"

NEW YORK OFFICE:
230 West 41st Street
New York City
Tony Cronin

SOUTHWEST OFFICE:
1225 South Trenton
Tulsa, Oklahoma
Eddie P. Gaughan

CHICAGO OFFICE:
1950 Daily News Bldg.
Chicago, Illinois
Scotty Campbell

WEST COAST OFFICE:
318 DeYoung Bldg.
San Francisco, California
Ed Sparks

NEW ENGLAND NEWSPAPER SUPPLY CO.

Gardener G. DeMallie, General Manager
164 FREMONT STREET WORCESTER, MASSACHUSETTS

Equipment & Supplies

(Continued from Page 8)

vent any particular matrix line from casting.

The Selectro-Matic Quadder also has been designed to operate from Teletypesetter tape signals. For this purpose, a memory system has been made a part of the quadder. This circuit transmits the proper tape or pushbutton signal as each line reaches casting position.

In addition to permitting operation by Teletypesetter, the memory circuit also permits continuous manual operation, since the operator need not wait for the preceding line to clear casting position before setting the quadder for the next line. In this event the operator presses the proper quadder button at the time the line is complete, and then begins setting the next line.

The Selectro-Matic Quadder circuit will cancel any quadding signal when a line is full enough to justify. The quadding signal can be cancelled out by an adjustment and justification permitted on lines which are a few points short of being full, or justification can be obtained on lines which are as much as three picas short. Lines which are not full enough to justify will be quadded automatically. These functions, states sponsor, are useful in news text composition and book work, and in preventing short line squirts.

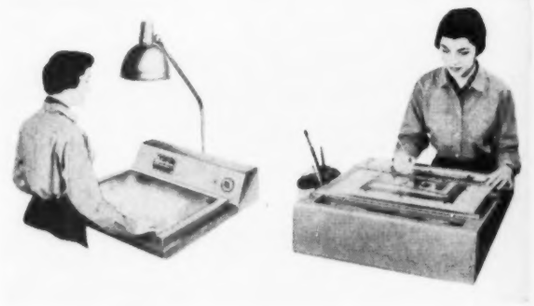
Sponsor also states another improvement consists of the dial type left hand vise jaw adjustment. The Selectro-Matic Quadder will quad on any odd or even measure at which the left hand vise jaw has been set. That is, if quadding on 23 picas plus 3 points is required, the dial control is set to that measure and the line will quad on that length of line. Please mention PEE No. 267 in your request for further information.

All quadding functions of the Selectro-Matic Star Quadder are controlled from the control box at the right of the line-casting machine keyboard. Quadder may be operated manually or automatically through Teletypesetter tape.

Vacuum Printing Frame and O-L-S Table

Companion pieces of platemaking equipment designed for small press operation have been announced by Robertson Photo-mechanix, Inc. Designated together as the Star Series Plate Mates, one is called the Star-Lite vacuum printing frame and the other has been named Star-Glo table. The vacuum frame is equipped with a Merc-a-lite exposure unit. Sponsor states the unit is designed to expose a full range of tones on all types of plates and sensitized materials. A single point light source and the specially designed reflector on the unit are said to combine to eliminate undercutting, halation and stray

(Continued on Page 14)



At left is the Star-Lite Vacuum Printing Frame announced by Robertson Photo-mechanix, Inc. Its companion piece for small platemaking operations is the Star-Glo Opaquing, Layout and Stripping Table shown at the right.

to the city of the "GOLDEN TRIANGLE" —

ANOTHER

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INSTALLATION

Cline-Westinghouse plays a key role in the expansion program of the Pittsburgh Sun-Telegraph . . . the family newspaper in the city of the "Golden Triangle".

Operating a battery of 12 new hi-speed metropolitan newspaper press units in the recently completed Sun-Telegraph annex building are Cline-Westinghouse Drives and Controls. Engineered to co-ordinate the printing qualities of the press with the circulation demands of the Sun-Telegraph, this electrical equipment including reels, tensions and pasters, exemplifies the speed and efficiency Cline-Westinghouse brings to America's foremost newspapers.

With a "heritage for progress" Cline engineers are able to give you the latest features in unit drives and control systems to best meet *your* present and *future* needs.

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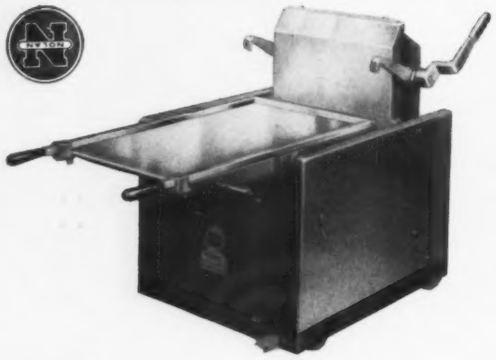

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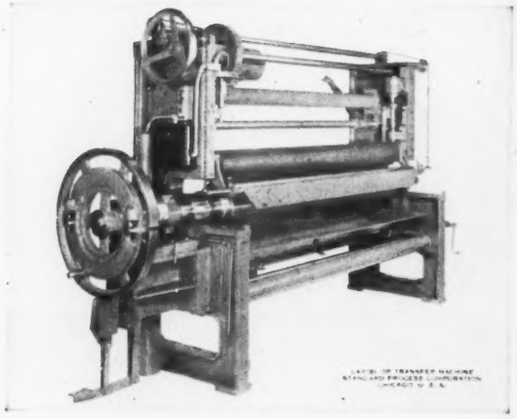

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PRECISION LAYON MACHINE

Manufactured in a wide range of sizes for transferring carbon tissue in perfect register to any number of cylinders. This is accomplished by means of a definite key between copy and cylinder, a positive method of fixing the cylinder in the machine and a device for checking accuracy of its position so it can be re-positioned any number of times. A lock on the dividing head secures the cylinder in position. The rubber impression roll is raised and lowered by a gear motor with pressure against the cylinder regulated by an adjustable control. Equipped with counter-balanced register bar, Vernier scale and scribe.

STANDARD PROCESS CORPORATION

Manufacturing Gravure Equipment & Supplies

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Equipment & Supplies

(Continued from Page 12)

reflections. Other features include right side up loading for alignment between plate and negative, and an enclosed heavy duty muffled pump and motor unit. Exposure area measures 17 in. by 22 in.

The companion unit to the Star-Lite printer is the Star-Glo opaquing, layout and stripping table. Robertson states the table is provided with fluorescent tubes which light instantly and provide soft, non-glare illumination. The plate glass is ground on the underside to provide even light diffusion. The Star-Glo table is equipped with calibrated stainless steel straight edges. A stainless steel T square is also available. Sponsor also states it is compact enough to be carried to different work areas. Working area measures 16 in. by 20 in. Storage space for rules, knives, etc., is provided by a tool tray in the unit. Please refer to PEE No. 248 for additional information.

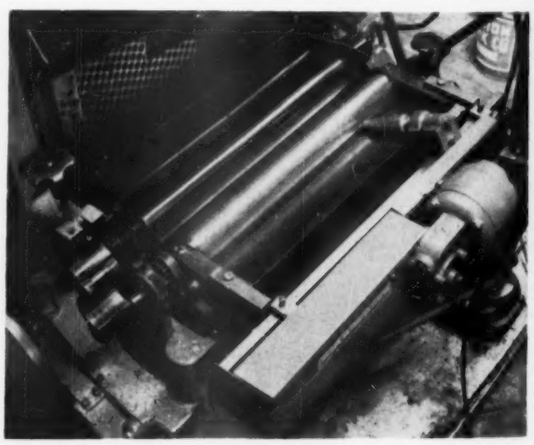
Ground Control Eliminates Explosion Hazards

The Hewson Company, Inc. has announced development of the Safe-T-Ohm (Model G-5) Automatic Ground Control. This automatic process control instrument is said to be safe to install in hazardous areas. It is used to safeguard the processing and handling of flammable materials from the accumulation of electrical charges that might cause a fire or explosion. Gasoline and chemical truck, tank car, and tanker loading and unloading operations, JP-4 fuel handling and similar hazardous operations are indicated applications for this equipment. These units provide a vital 24-hr. protection against fires and explosions caused by the build-up of electrical potentials on inadequately grounded equipment. Processing operations are claimed to be automatically halted until satisfactory ground connections are made.

When resistance to ground is in excess of the maximum allowable resistance of 5 ohms, the Safe-T-Ohm Model G-5 prevents loading or processing of hazardous materials from being commenced or continued. This automatic process and ground control greatly reduces possibility of fires and explosions caused by static charges or stray electrical currents in all hazardous operations. For further information please mention PEE No. 243 in your request.

(*Continued on Page 26*)

Ink Agitator for Verticals—An Ink Fountain Agitator designed for the Miehle Vertical Letterpress has been added to the line of Baldwin Products, manufactured by the William Gegenheimer Co., Inc. The Baldwin Ink Fountain Agitator is powered by its own 1/20 h.p. motor and operates on 110 v. current from any light socket. A rotating cone sweeps the full length of the ink fountain, mixing the ink constantly and at the same time forces the ink against the ink fountain roller. This continuous milling action of the cone is designed to keep the ink in working condition. Sponsor states this action assures a steady flow of the ink resulting in better coverage of heavy forms and helps to improve the quality of every job including printing with carbon, metallic or heavy bodied inks. It is said the Agitator in no way interferes with operation of the press when running, nor when the press is opened for makeready or when setting the ink fountain. An illustrated folder may be obtained by mentioning PEE No. 259 in your request.



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Models for all photo-mechanical reproduction processes—for saving money on every job while making it easier.

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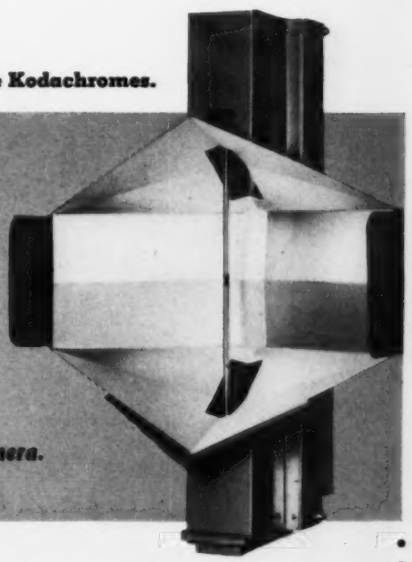
- ★ **Eliminate illumination variables in accurate control of densities, regardless of line voltage variations.**
- ★ **Sharper reproduction.**
- ★ **Eliminate dot undercutting.**
- ★ **Power to punch through dense Kodachromes.**



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A vertical trim lamp which burns at 75 amperes and 23 volts at the arc. The transformer is of the isolated secondary type, providing complete protection from shock to the operator.

Light in weight. Readily mounted on the lamp support arms of any camera.

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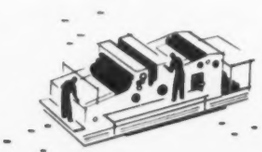
In the graphic arts, as in every major industry, it is the obligation of leadership to set and maintain higher standards of quality and service.
Ever since the first printing rollers were made by Sam'l Bingham, more than a century ago, he and his successors have fulfilled this obligation.

Bingham's continual research developed new rollers that made possible the use of faster presses, modern inks, and better techniques in the pressroom. Today, leading printers ship their rollers to Bingham's modern factories for the finest workmanship and service on composition, rubber and special materials.



THESE ARE FACTS:

High-speed presses use up the effective mileage on rollers sooner than older, slower presses.
Long continuous runs wear out rollers faster than infrequent press runs.

Replacing rollers as soon as their life of efficiency has been spent guarantees lower production costs and increased quality of printing.

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COMPOSITION . . . RUBBER . . . VULCANIZED OIL Rollers

147 TIMKEN® bearings add up to high-speed dependability in big Babcock 5-color press

THIS Babcock 5 & 5 or Double 3 & 2 prints 5 colors on a single web or 3 & 2 colors on two webs simultaneously—Maximum web width 74″. Used for printing magazines, it provides heavy-duty, high-speed performance—1200 ft. per minute—with flawless dependability.

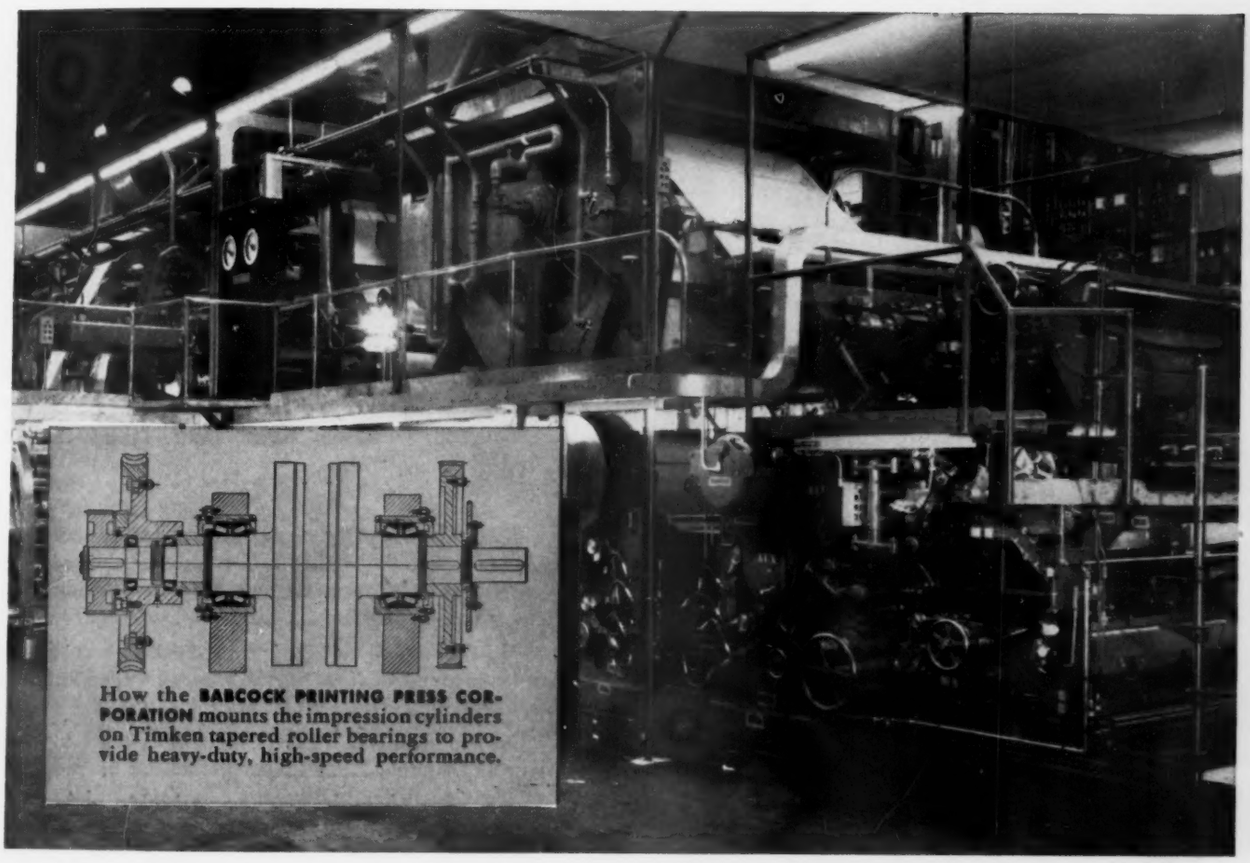
Significantly, Babcock places its reliance in Timken® tapered roller bearings, 147 of them to be exact, in 9 key locations throughout the drive, to the press, ink carriages and folder, "Particularly," says Chief Engineer C. V. Knell, "where there is a combination of thrust and radial loads."

Their tapered construction lets Timken bearings take radial and thrust loads in any combination. Cylinders and shafts are permanently aligned, wear on moving parts reduced.

Timken bearings are designed to have true rolling motion and precision manufactured to live up to their design. They practically eliminate friction, remove all speed restrictions due to bearings.

No other bearings can give you all these advantages. Wherever long-lasting precision is important, use the bearings trade-marked "Timken". The Timken Roller Bearing Company, Canton 6, Ohio. Canadian plant: St. Thomas, Ontario. Cable address: "TIMROSCO".

This symbol on a product means its bearings are the best.



How the **BABCOCK PRINTING PRESS CORPORATION** mounts the impression cylinders on Timken tapered roller bearings to provide heavy-duty, high-speed performance.

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TRADE-MARK REG. U. S. PAT. OFF.

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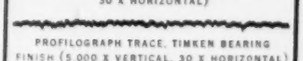
PROFILOGRAPH TRACE, GOOD COMMERCIALLY GROUND FINISH (5,000 X VERTICAL, 30 X HORIZONTAL)



PROFILOGRAPH TRACE, TIMKEN BEARING FINISH (5,000 X VERTICAL, 30 X HORIZONTAL)

OPTICAL FLAT, PERFECT FINISH

SMOOTH TO MILLIONTHS OF AN INCH

Surface finish of high quality Timken bearing rollers and races is so smooth that it takes a profilograph to measure its smoothness. This instrument measures surface variations to a millionth of an inch, as shown at the left.

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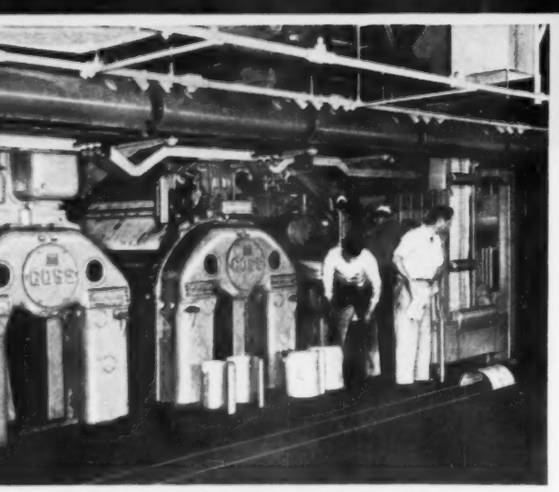


The Headliner

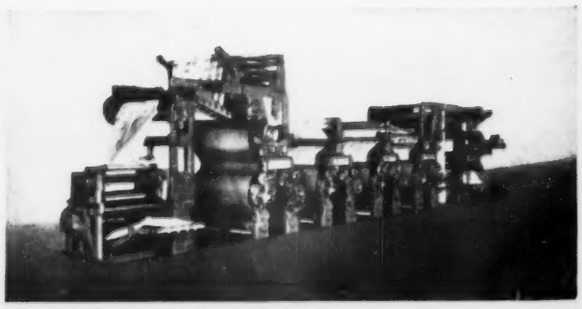
PROVEN PE

GOSS offers *plus performance* presses and stereotype equipment engineered specifically for individual needs, whether yours is a metropolitan daily, a growing medium-size newspaper, a small city daily, a weekly—or a magazine.

You are invited to examine production records in pressrooms in all parts of the world, where comparison will prove why Goss presses are preferred.

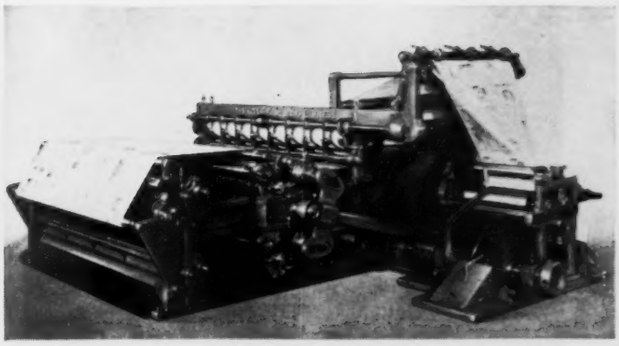
The full Goss line includes the high speed HEADLINER (world's Number 1 newspaper press) . . . the efficient, flexible, single-width semi-cylindrical UNIVERSAL . . . the newly redesigned UNITUBE (providing a full range of ROP color for medium-size dailies and commercial plants) . . . the compact DEK-A-TUBE for exceptionally low-cost operation . . . the rugged, economical COX-O-TYPE flatbed . . .

Multi-Color Press



The Unitube

The Dek-A-Tube



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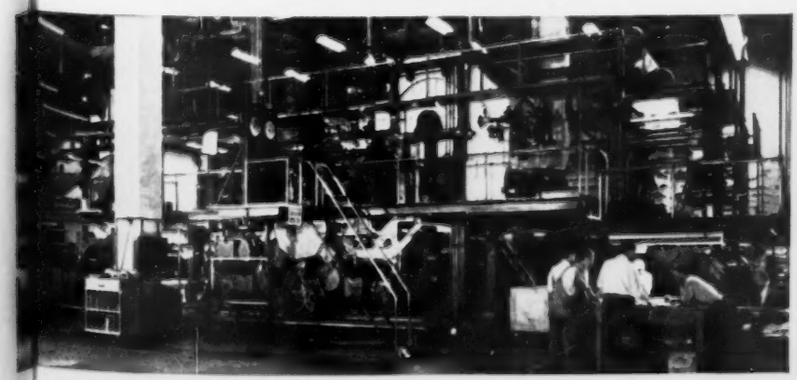
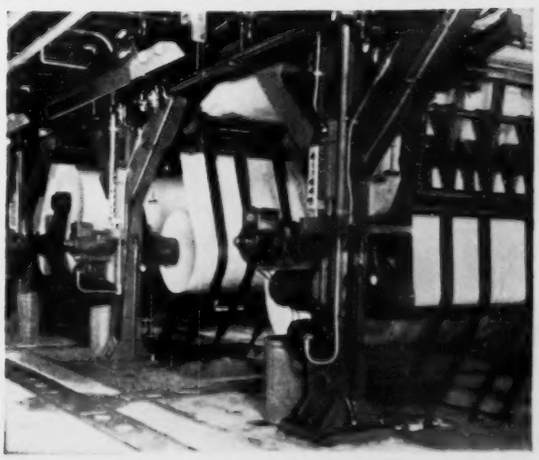


Magazine Press



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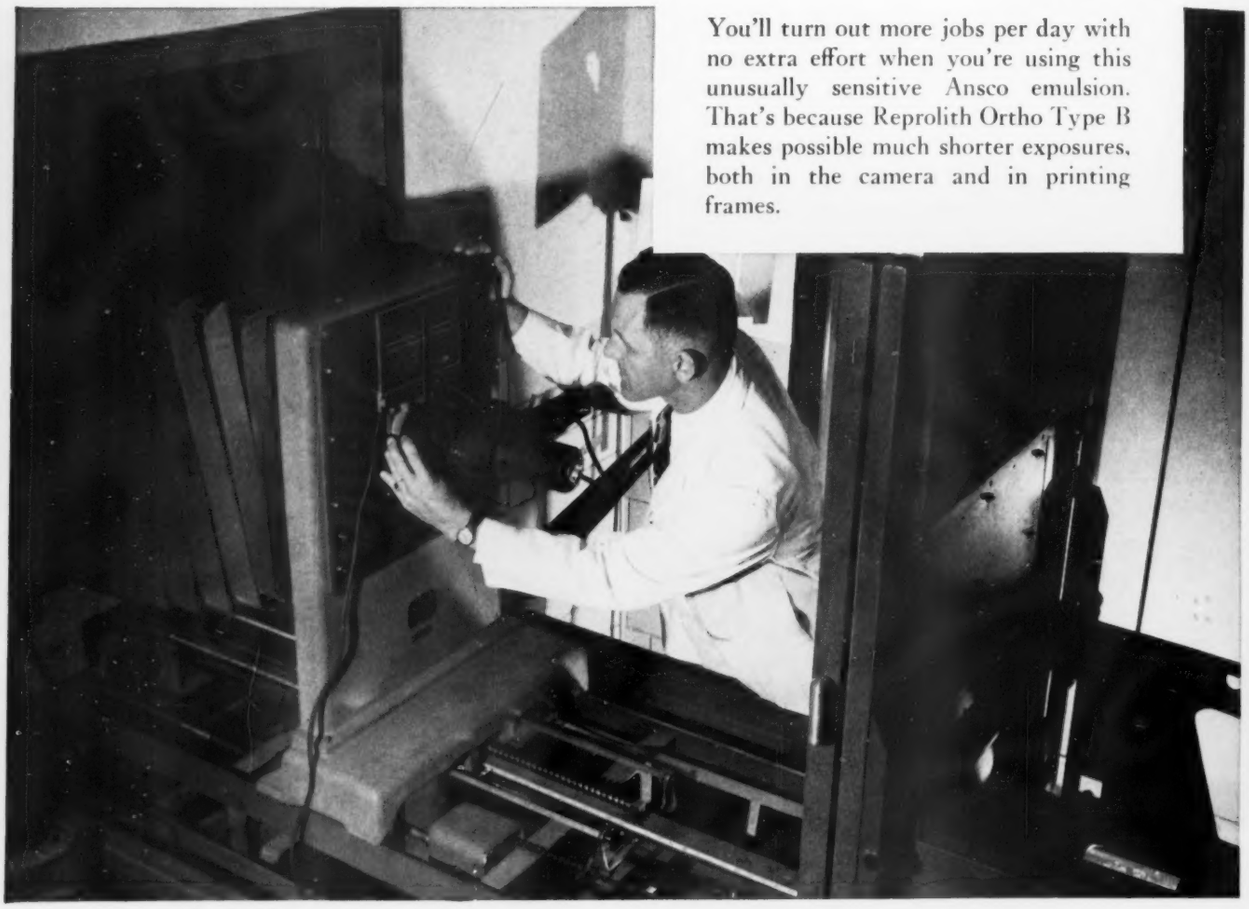
Step up your production with Ansco Reprolith Ortho Type B Film



You'll turn out more jobs per day with no extra effort when you're using this unusually sensitive Ansco emulsion. That's because Reprolith Ortho Type B makes possible much shorter exposures, both in the camera and in printing frames.

Reprolith Ortho Type B Film gives you a more efficient shop through these advantages

VERSATILITY—Negative and positive halftones or line work, whether the copy is multicolored or monochromatic, can be made on Reprolith Ortho Type B.

FULL ORTHOCHROMATIC SENSITIVITY—Filters may be used for improved copy rendition, thereby reducing handwork on negatives.

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Clarity in white areas . . . high resolving power . . . fine dot etching properties . . . high contrast . . . wide developing latitude.

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- Ball-bearing form rollers
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- Automatic overload safety
- Rotary feed and delivery system
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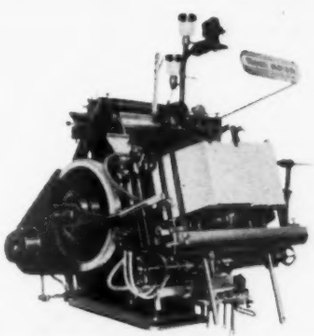
- Save-a-step press stops
- Positive wide-range speed control
- Disconnecting form rollers



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From refreshing monotones to the most exacting multi-color reproduction, Cottrell printing presses and allied machinery assure greater profit . . . finer results.

COTTRELL

TWO COLOR S. I. SHEET-FED ROTARY

Press Designation	Sheet Size Limits	Max. Size Print	Sheets per Hour	Feeder Capacity	Delivery Capacity	Length	Width
M-S.I. 248	36x48" 24x30"	35½x47½"	up to 6500	54"	68"	28'7" *30'5"	14'4"
M-S.I. 262	43x62" 28x40"	42½x61½"	up to 6000	66"	66"	31'10" *31'10"	16'

*Continuous Feeder

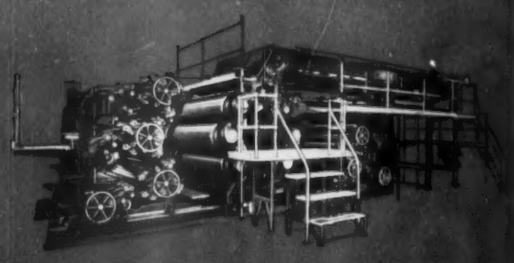
Up to 6500 sheets per hour in perfect register ...ideal for modern, growing commercial printer.

FIVE COLOR SHEET-FED ROTARY LETTERPRESS

Press Designation	Sheet Size Limits	Max. Size Print	Sheets per Hour	Feeder Capacity	Delivery Capacity	Length	Width
M-C.F. 548	36x48" 24x30"	35½x47½"	up to 6500	57"	62"	36'10" *38'8"	16'6"
M-C.F. 559	40x59" 25x38"	39½x58½"	up to 5500	62"	62"	39'6" *41'3"	17'11"
W-C.F. 571	48x71" 32x46"	47½x70½"	up to 5000	63"	63"	38'5" *40'10"	18'9"

*Continuous Feeder

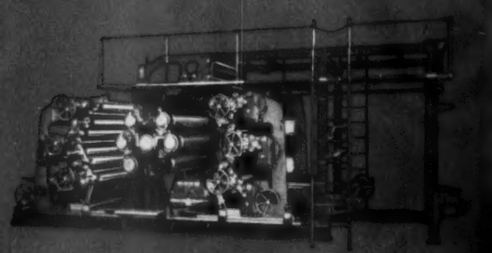
All 5 colors work in conjunction with a common impression cylinder. Eliminates sheet transfer, reduces makeready time.



SIX COLOR ROLL TO ROLL LETTERPRESS

Sizes 36"x52" 40"x62" 36⅞"x66"

Six colors...roll to roll with tension control and Scan-a-web register check.

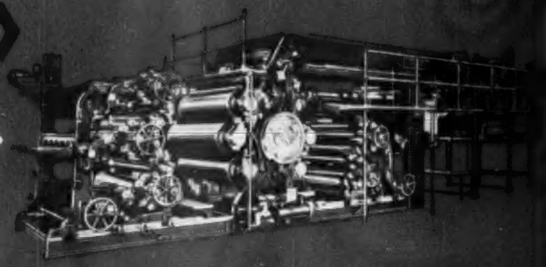


FIVE COLOR DOUBLE DELIVERY BOXBOARD ROTARY

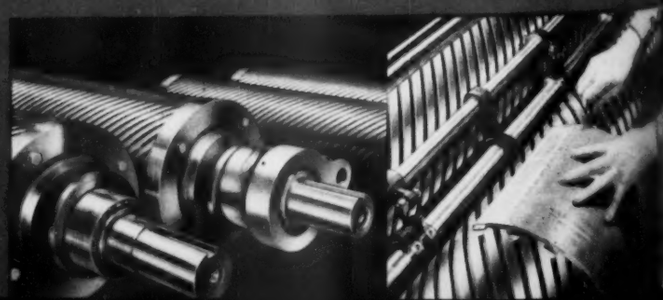
Press Designation	Sheet Size Limits	Max. Size Print	Sheets per Hour	Feeder Capacity	Delivery Capacity	Length	Width
M-C.F. 548DD	36x48" 24x30"	35½x47½"	up to 6500	57"	62"	43'2"	16'6"
M-C.F. 559DD	40x59" 25x38"	39½x58½"	up to 5500	62"	62"	46'	17'11"
W-C.F. 571DD	48x71" 32x46" Std. 26x35" Sp.	47½x70½"	up to 5000	63"	63"	47'7"	18'9"

Note: Also available for Single Delivery

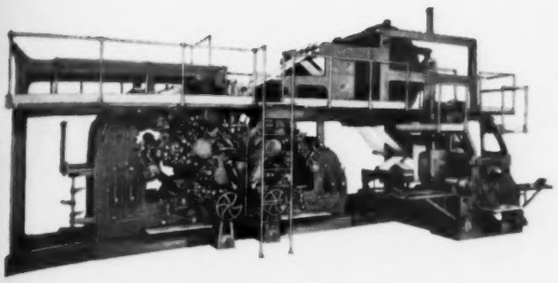
Specifically designed and created for hi-speed, hi-quality boxboard printing.



Cottrell spirally grooved plate cylinders for any make press. Cylinder journals, hardened steel bearers and cylinder body precision ground at one setting. Cylinders run on double Timken roller bearings for long wear and low starting torque.



COTTRELL



Cottrell Double-Ender Magazine Cover and Insert Press and Folder

Cottrell Multi-Color Custom Roto-Gravure Press for magazine and newspaper

Typical Examples of Cottrell Custom Web Presses

Other custom-built Cottrell presses include black, two color and multi-color web letterpresses and folders as well as gravure and letterpress converting presses for the packaging field.

CURVED PLATE BORING MACHINE

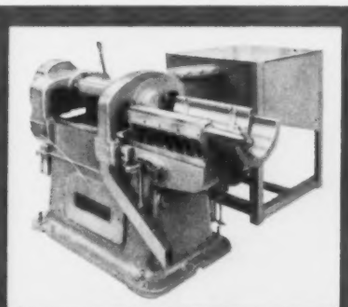
Floor Space-Single Spread Machine. 3'5" x 6'8"
Net Weight — 3200 lbs. (approx.)
Floor Space-Double Spread Machine. 5'5" x 9'3"
Net Weight — 3900 lbs. (approx.)
Motor — 5 H. P. (either size)

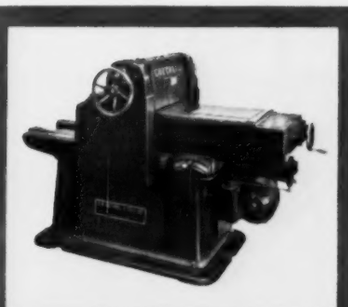
FLAT PLATE SOLIDIFYING AND SHAVING MACHINE

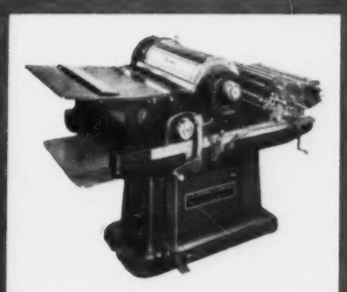
Capacity — Max. plate 19" x 26"
Floor Space — 46" x 9'0"
Motor — 5 H. P. (included)
Weight — 6000 pounds
Oilgear hydraulic drive

CURVED PLATE SOLIDIFIER

Capacity — 25" width
Floor Space — 36" x 60"
Motor — 3 H. P. (included)
Weight — 3000 pounds
Available in any cylinder size







Originators of the common impression method, Cottrell presses assure the finest result with minimum makeready.

COMBINATION ROUGHING AND SHAVING MACHINE

Capacity — Max. plate 18" x 24"
Floor Space — 41" x 8'7"
Motor — 10 H. P. (included)
Weight — 6000 pounds

CURVED PLATE PROOF PRESS

Capacity — 25" width
Floor Space — 57" x 83"
Motor — 1 H. P. (included)
Weight — 3000 pounds
Available in any cylinder size

CURVED PLATE SHAVING MACHINE

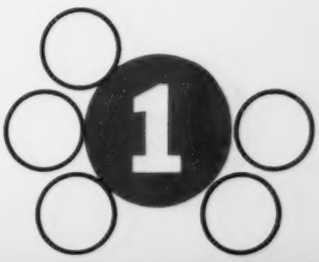
Capacity — 25" width
Floor Space — 36" x 60"
Motor — 3 H. P. (included)
Weight — 3000 pounds
Available in any cylinder size

COTTRELL...
COLOR PRESS PIONEERS

Cottrell register plate hooks provide simple, fast, accurate lockup... Made of special heat treated chrome-nickel steel, hooks are exceptionally strong.

Available types: single and double locks; straight, curved or as a gang hook for fixed position on cylinders.

C. B. COTTRELL & SONS COMPANY
Westerly, Rhode Island — Milwaukee, Wisconsin
Sales Offices: New York, Chicago, London



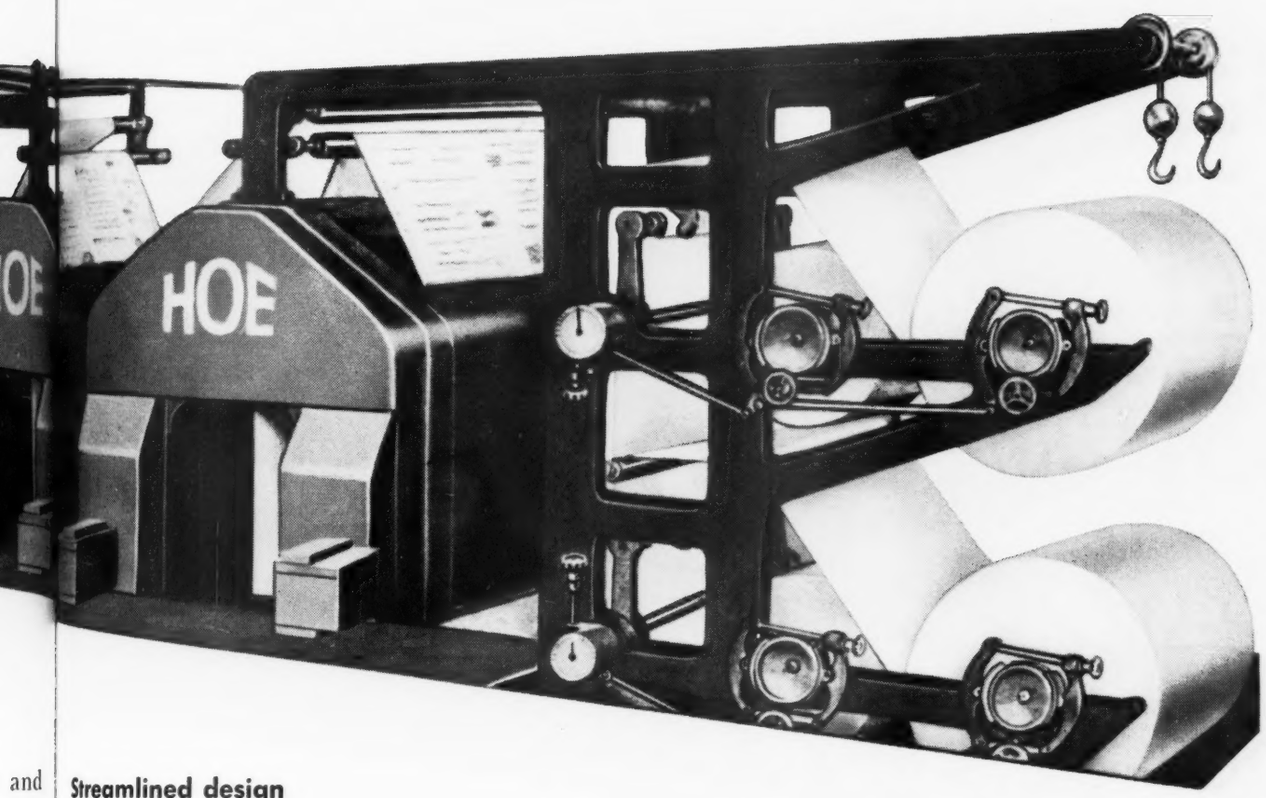
Introducing a

for non-Metropolitan Dailies and Weekly Newspapers needing high grade two-plate wide equipment, with unequaled facilities for ROP color.

Built to the same exacting standards as the famous HOE COLOR-CONVERTIBLE, this new press is designed to meet the needs of its field in an equally superior manner.

For further particulars please contact any HOE office.

NEW Single-Width Unit-Type Press..by HOE



Streamlined design

Fully enclosed printing units

Force-feed oil lubrication

HOE ink pumps

Automatic web tension

High speed collecting type folder

Optional ¼ page auxiliary folder

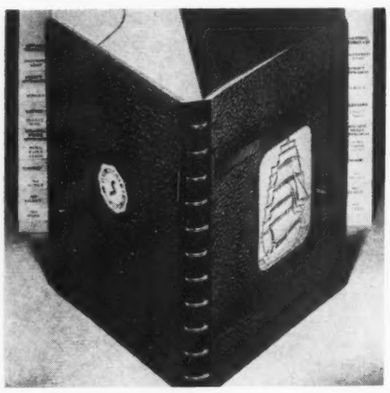
R. HOE & CO., INC.
910 East 138th Street • New York 54, N. Y.
BRANCHES: BOSTON • CHICAGO • SAN FRANCISCO
BIRMINGHAM • PORTLAND, ORE.

Equipment & Supplies

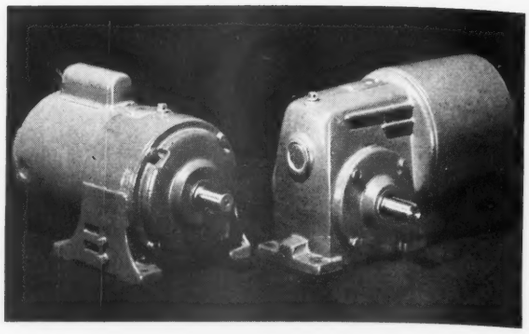
(Continued from Page 14)

Improved Wire Binding

Spiral Binding Co., Inc., has developed an improved wire binding consisting of the use of multiple rings. To be



known as Lino-Lok binding, the sponsor claims the forming of the wire prevents any sheets from slipping out. It is also claimed the Lino-Lok binding permits pages to lie flat and in alignment. It is available in exposed and semi-concealed types. Minimum and maximum binding edges for Lino-Lok binding is 2 in. and 24 in., respectively. It may be used on book thicknesses ranging from ⅜ in. to ½ in. Please refer to PEE No. 262 for more information.



The General Electric gear motors, concentric shaft (left), right angle (right), are part of the company's recently announced Form G line of fractional horsepower motors.

Fractional Horsepower Motors

The recently announced right angle and concentric shaft gear motors are said by General Electric Co. to be smaller and lighter than previous G-E designs. Both motors are designed for use on such applications as pumps, printing equipment, conveyors, material handling equipment and advertising display devices.

It is claimed that because the driving motor is close coupled and positively geared to the output shaft, the units provide maximum transmission of torque, uniform speed and no slippage. The motors are reconnectable externally to reverse the direction of shaft rotation.

The right angle shaft gear motor is available in ratings of ¼, 1/3, ½ and ¾ h.p., from 24 to 148 r.p.m., 115/230 v., single phase, and 220/440 v., three phase. The concentric shaft motor is available in ratings of ¼, 1/3, ½ and ¾ h.p., from 13.5 to 520 r.p.m., 115/230 v., single phase, and 220/440 v., three phase. Additional details may be obtained by mentioning PEE No. 256 in your request.

Remelting Equipment Catalog

Illustrations, descriptions and specifications of remelting equipment for both newspaper and commercial printing plants are included in a 16 page catalog prepared by Nolan Corporation. The catalog provides explanations of Nolan remelting furnaces equipped with atmospheric burners, pressure or blast burners, bottled gas burners, oil burners and electric heating elements. Ingot molds, and furnace accessories and control de-

(Continued on Page 30)

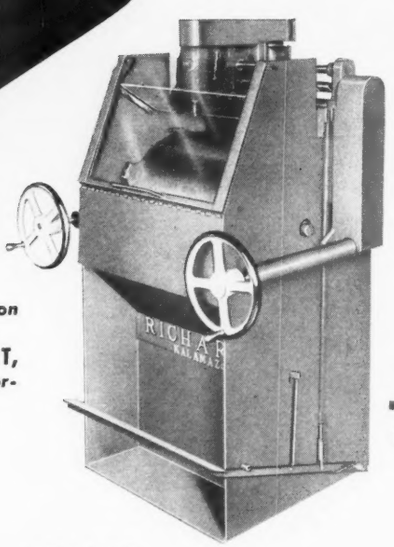
SPEED PRODUCTION WITH RICHARDS!

• SAWS
• ROUTERS
• MORTISERS

For further information on these and other RICHARDS EQUIPMENT, Saws — Routers — Mortisers, please write

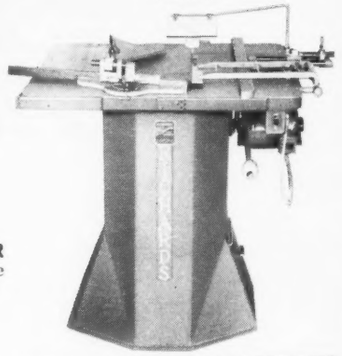
J. A. RICHARDS COMPANY
903 N. PITCHER ST. · KALAMAZOO, MICHIGAN

NEW MODEL



Code: M2-B
ENCLOSED CURVED PLATE ROUTER
with new close coupled single belt drive
Ball bearing construction throughout
Price $1875.00 complete

Code: PMRS
'MULTIFORM' RADIAL ROUTER
For Straightline and Fine Detail Routing
Patented Straightline Control Feature



'ELECTROMATIC' SAW TRIMMER
For Stereotypers, Electrotypers, Photoengravers

Code: EST-27x36 Table
ESST-32x42 Table

HIGH PROFITS

THROUGH

HIGH PRODUCTION

MILLER E.B.CO FEEDROLL REGISTER

Only three easily accessible cap screws need be adjusted to move the register bar. Sheets may be swung to the right or left or bowed in the center to correct fan out on the tail of a sheet — a time-saving "big press" feature that helps minimize down time and mis-register on Miller E.B.CO 22x34 Feedroll Offset Presses. Write today for the new catalog which illustrates more features of this profitable press.

miller

MILLER PRINTING MACHINERY CO.

1103 Reedsdale St. Pittsburgh 33, Pa.

The Weather

Today—Mostly sunny and pleasant, with highest temperature around 80. Saturday—Some cloudiness and warmer; chance of showers by night. Thursday's temperatures: High, 79, at 4:45 p. m.; low, 69 at 6:10 a. m. (Details on Page 24.)

The Washington Post and Times Herald

FINAL

Registers R.O.P. Color Automatically

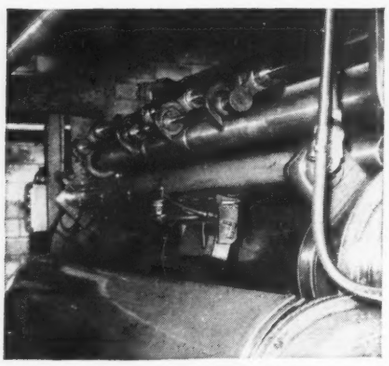
Hurletron Automatic Register Control maintains multi-color register at all operating speeds

Readers and advertisers have benefit of excellent multi-color printing in editorial and advertising sections of Washington's leading newspaper.

★ ★ ★

Washington D. C., 1954. One of the greatest improvements in newspaper color printing equipment is now in successful operation at the plant of the Washington Post & Times Herald. This device, the Hurletron Automatic Circumferential Register Control, is an amazing development with a capacity for efficiency and accuracy far beyond that of the most experienced and conscientious pressman.

The Hurletron Control continuously observes the condition of register in the press at all speeds. When variables cause minute deviations in register, the device automatically initiates compensating mechanisms to return the colors to perfect register before the error becomes visible to the human eye. Where extreme deviations occur, as in splices, the Hurletron high speed compensation greatly reduces waste copies.



This shows the Hurletron web-viewing scanner in operating position.

Accurate within thousandths of an inch

With this modern electronic equipment, specifically designed and engineered for the control of R.O.P. color, the Washington Post & Times Herald is able to produce multi-color printing of a quality never before approached in newspaper printing. The same is true of the Milwaukee Journal and other color printing plants where Hurletron Color Register Controls are also in operation.

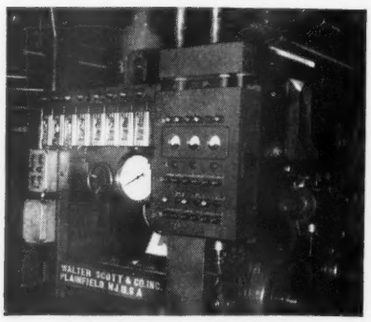
A profitable investment

R.O.P. color is more and more in demand by both national and local advertisers. Furthermore, ordinary R.O.P. color is no longer acceptable to many progressive advertisers. Quality is a "must." And that means consistently accurate register throughout the press run.

With Hurletron Controls providing this consistently accurate register, the Washington Post & Times Herald is able to offer the finest quality R.O.P. color reproduction to any advertiser. As a result, advertisers are buying it . . . and paying a premium to get this quality. This equipment will pay for itself within a reasonable length of time in increased production, improved quality, and reduced waste.

Simple to operate

It is really remarkable how simple it is to operate this equipment. The controls and indicators are housed in a metal cabinet mounted at a convenient location. Dials provide pressmen with a continuous indication of running register. Colors are first brought into register by manual push-button controls, the corrections being shown on the dials in known increments. As soon as all colors have been brought into register manually, the controls are switched to "automatic." All further corrections are made automatically and are held to an accuracy of a few thousandths of an inch. Of particular importance is the fact that corrections at splices are made at high speed, thus materially reducing the number of bad copies.



The master control panel gives the pressman a continuous visual indication of running register.

Also used for web-fed letterpress and rotogravure

Hurletron Register Controls were originally developed for use in color rotogravure printing. Today, practically every producer of outstanding color-roto has his presses equipped with Hurletron Controls. Likewise, most of the country's largest magazine printers have installed Hurletron Controls on their web-fed letterpresses. The exceedingly fine quality work now being produced by these printers is evidence of the accuracy and efficiency of this equipment.

Further details available without obligation

For more information about Hurletron Automatic Circumferential Register Controls, write today to

ELECTRIC EYE EQUIPMENT COMPANY

1930 EAST FAIRCHILD STREET • DANVILLE, ILLINOIS

Manufacturers of Hurletron Center and Side Web Guide; Cut-Off and Back-Up Controls; Moisture Controls; Caliper and Weight Controls for Paper and Paperboard.

Metalife

5 in 1 SOLUTION

for processing surface plates

Manufactured by
Wm. A. Frangos, Inc.

Here is the most amazing time and money saver offered lithographers in many years. It can be used for all processing steps except coating . . . simplifies inventory. It is another "*first*" by William A. Frangos, Inc., Bellerose, Long Island, N. Y., distributed exclusively by Sun Supply Company.

Metalife Surface Coating is the perfect companion product. It coats twice as many plates per gallon . . . carries a *guaranteed* shelf life of one year . . . contains not more than 0.5% bichromate.

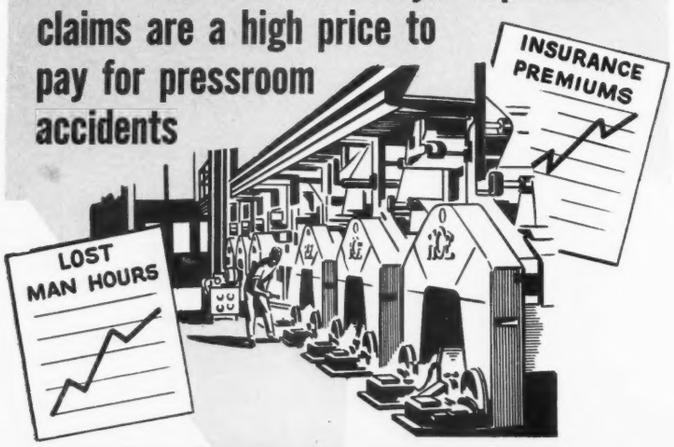
Used in combination, these products produce surface plates of a quality and life otherwise obtainable only with deep etch. Press runs of 250,000 impressions have been reported. Plates are unaffected by humidity—you can coat them today, use them anytime in the next two weeks. Users report that makeovers are "practically eliminated."

A Division of *Chemical Corporation*

WRITE today for detailed literature—or ask us about a demonstration. Please address Dept. S1-94.

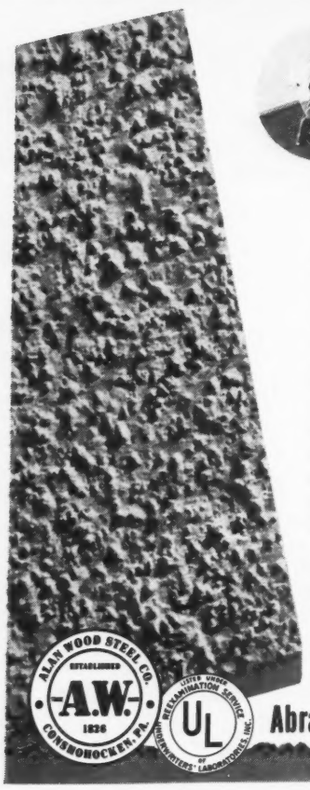
Sun Supply Company
10th Street and 44th Avenue, Long Island City 1, N.Y.

Lost man hours and heavy compensation claims are a high price to pay for pressroom accidents



RAISE SAFETY RECORDS... CUT INSURANCE COSTS with

ALGRIP



ALGRIP Abrasive Rolled Steel Floor Plate installed wherever floors are slippery, ends crippling pressroom accidents at once—and chops down high insurance costs as well.

Plants nation-wide, have found that Underwriters' approved ALGRIP floor gives true foot safety—even when wet or slicked with ink mist . . . even on steep inclines.

The reason is hundreds of tiny abrasive particles impregnated *to a controlled depth of penetration* into tough, lightweight steel plate, giving each square foot of ALGRIP an abrasive "grinding-wheel" grain surface that *stays* non-slip! And ALGRIP's surface won't become smooth because hard wear only exposes new gripping particles . . . an exclusive ALGRIP feature.

Investigate ALGRIP now. You'll find it pays for itself in savings on insurance premiums. Mail this handy coupon today for full details. There's no obligation.

ALAN WOOD STEEL CO. ESTABLISHED A.W. 1826 CONSHOHOCKEN, PA.

UNDERWRITERS' LABORATORIES INC. EXAMINATION SERVICE UL

A.W. ALGRIP
Abrasive Rolled Steel Floor Plate

ALAN WOOD STEEL COMPANY
CONSHOHOCKEN, PA.

Please send Booklet AL-30 on cutting costs with ALGRIP.

Name_____ Title_____

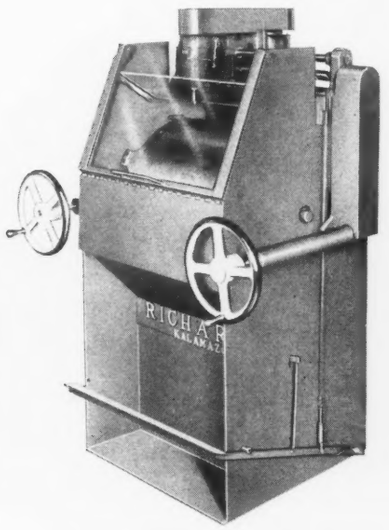
Address_____

City_____ Zone_____ State_____

Equipment & Supplies

(Continued from Page 26)

vices are also shown. Another part of the catalog is devoted to the Nolan Meltevator, an automatic pot loading unit. Please request PEE No. 269 for a copy for your company.



Single Belt Drive Curved Plate Router—A new model single belt drive curved plate router has been announced by J. A. Richards Co. This semi curved plate unit is enclosed in a larger cabinet. The single belt drive of close coupled design connects motor to router spindle. Sponsor states the single belt and close coupled design permit a smaller h.p. motor to be used. The router is of all ball bearing and triangular rail construction makes for rigidity and ease of operation. This router is designed for daily newspapers doing color work. Further information will be furnished gladly. Please mention PEE No. 244 in your request.

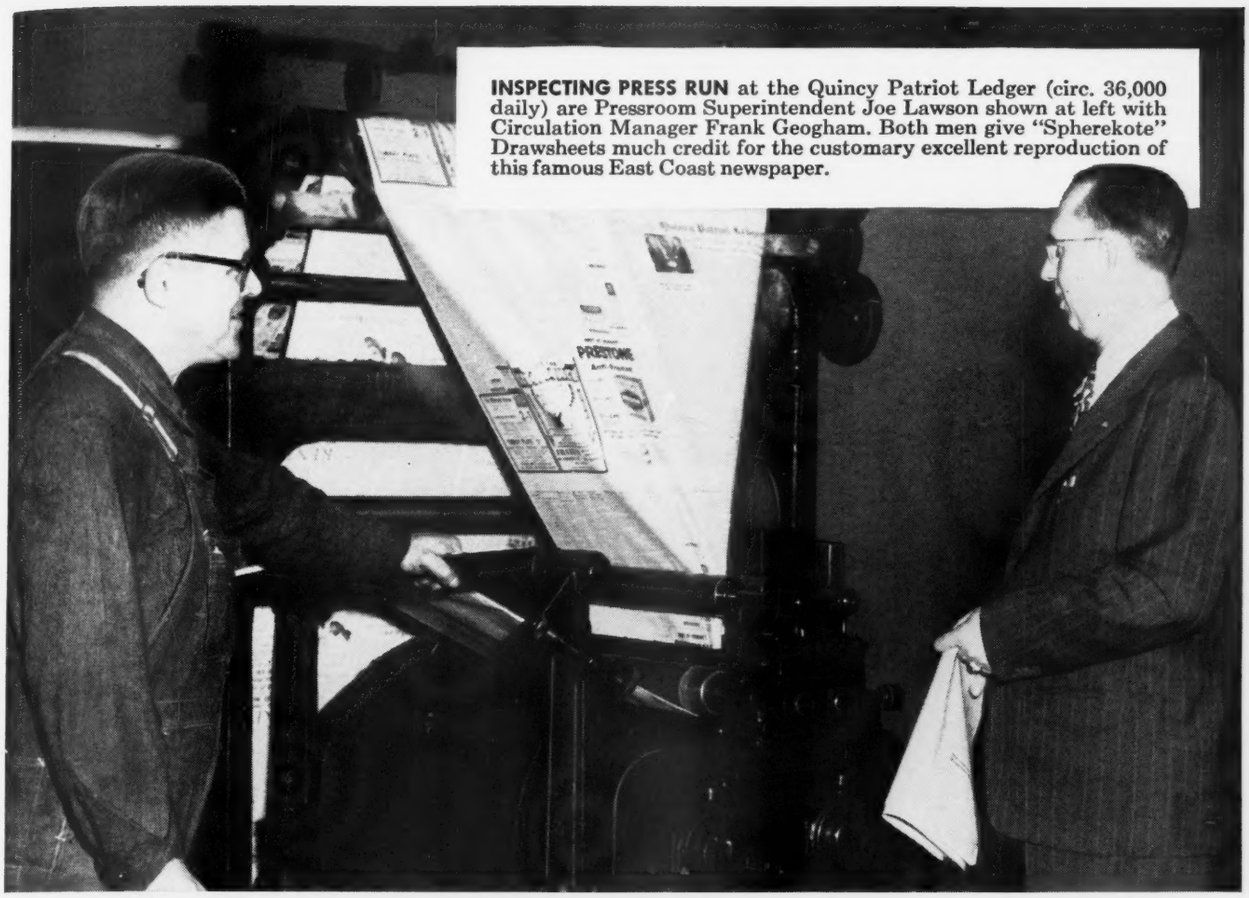
Spherekote Tympan Booklet

Offset prevention, fast reverse side printing and perforating directly on the surface without the use of metal shims are some of the advantages of Spherekote tympan sheets outlined in a 16 page booklet available from Minnesota Mining and Mfg. Co. Titled *Time-Saving Tools for the Pressroom*, the booklet includes illustrations of Kelly, Kluge, Miehle, Miller and Vandercook presses, and lists for each press the time and money-saving advantages of using Spherekote tympan as top sheets on press packings. Please mention PEE No. 268 when requesting a copy.

Miniature Lubricating System

A tiny, compact lubricating system designed especially for the lubrication of small machine elements has been reported by Bijur Lubricating Co. Known as the L Special, initial applications of the unit have been made on coil winders

(*Continued on Page 37*)



INSPECTING PRESS RUN at the Quincy Patriot Ledger (circ. 36,000 daily) are Pressroom Superintendent Joe Lawson shown at left with Circulation Manager Frank Geogham. Both men give "Spherekote" Drawsheets much credit for the customary excellent reproduction of this famous East Coast newspaper.

"SPHEREKOTE" Drawsheets reduce first-impression offset at QUINCY (Mass.) PATRIOT LEDGER

A VETERAN of 15 years' service with this Quincy, Mass. newspaper, Joe Lawson knows the value of top quality press packing. That's why he has equipped 11 units of Duplex Tubular with "Spherekote" Brand Type 26 Drawsheets. He's learned from experience that these tough, glass-bead surfaced draws clean up his first impression pages—solve his offset problems for keeps. He's also pleased with the 18 to 20 months' service he gets from each and every sheet. Why not try this superior press packing yourself? You'll get the same good results.

QUICK FACTS

"Spherekote" Draws give: More preferred positions for cuts and advertising ● faster make-up ● tighter papers ● fewer press stops for replating ● no waste copies from first-impression offset.

REG. U.S. PAT. OFF.
SPHEREKOTE
BRAND
DRAWSHEETS

Made in U.S.A. by MINNESOTA MINING AND MFG. CO., St. Paul 6, Minn.—also makers of "3M" Brand Sensitized-Aluminum Photo-Offset Plates, "Scotchlite" Reflective Sheeting, "Scotch" Brand Pressure-Sensitive Tapes, "Scotch" Sound Recording Tape, "Underseal" Rubberized Coating, "Safety-Walk" Non-slip Surfacing, "3M" Abrasives, "3M" Adhesives. General Export: 122 E. 42nd St., New York 17, N. Y. In Canada: London, Ont., Can.

FREE SAMPLE!

Minnesota Mining and Mfg. Co., Dept. PEE-94, St. Paul 6, Minn.

Return today for full facts and free 3" x 5" sample of "Spherekote" Type 26 Drawsheets.

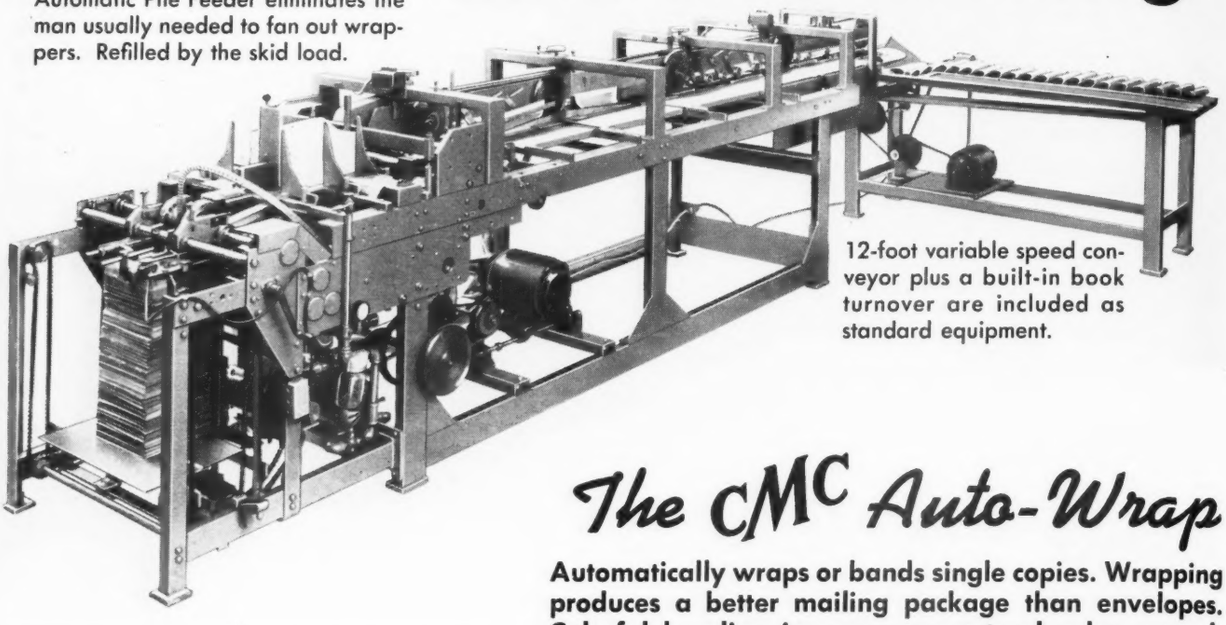
Name.....

Address.....

City.....Zone...State.....

Better Periodical Mailing at a BIG Saving

Automatic Pile Feeder eliminates the man usually needed to fan out wrappers. Refilled by the skid load.



12-foot variable speed conveyor plus a built-in book turnover are included as standard equipment.

The CMC Auto-Wrap

Automatically wraps or bands single copies. Wrapping produces a better mailing package than envelopes. Colorful banding increases newsstand sales appeal.

The wrappers are drawn tightly around the magazine—looseness, which results in battered magazines with envelope mailing, is avoided.

FORTUNE, IRON AGE, DRUG TOPICS, DEPARTMENT STORE ECONOMIST and FOOD TOPICS are a few of many periodicals that are getting a superior delivered package by Auto-Wrap type wrapping than by mailing in envelopes.

The Auto-Wrap quickly pays for itself through saving the difference between envelope and wrapper costs, elimination of hand work and conservation of space.

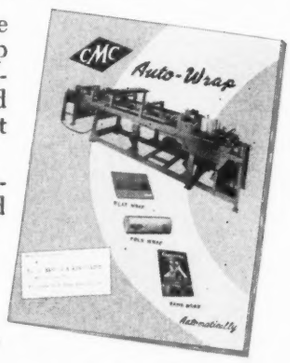
A publisher mailing 35,000 periodicals each week is saving $19,000.00 a year in wrapper cost alone by Auto-Wrap type flat-wrapping instead of envelope mailing.

Economies effected by replacing a complete hand wrapping department with one Auto-Wrap are tremendous.

With just one operator to keep the book hopper filled, the Auto-Wrap produces up to 6,000 wrapped periodicals an hour, delivered fanned out to the mailing crew on a 12-foot variable speed conveyor.

Roll feed, imprinter, inserters, electric counter and/or addressing head are optional.

Send for bulletin.



Automatically

FLAT WRAPS

FOLD WRAPS

Makes a better mailing package than enclosure in envelopes.

BAND WRAPS

Locates colorful bands where desired for maximum newsstand sales appeal.

Distributed Exclusively by

L. C. MARTIN & ASSOCIATES

894 Linden Avenue, Winnetka, Illinois

BUILT BY CLYBOURN MACHINE CORPORATION, CHICAGO

Your ATF rep isn't keeping this under his hat!

● "This" is the best answer you're likely to find for most any printing problem you run across.

It's your ATF man's business to know a wider line of equipment than other printing press representatives. Letterpress, offset, gravure—sheet-fed or web-fed—he handles them all. Composing room, press room, bindery, offset and miscellaneous equipment, too.

With this line-up of products to sell, your ATF representative can give you complete information when it comes to choosing the right equipment for your particular operation.

It pays to take advantage of the knowledge he's got under that hat of his. Ask him about the ATF presses on the following pages, and you'll find out how ready he is to bring it out where it can do both you and him some good. American Type Founders, *a subsidiary of Daystrom, Inc.*, 200 Elmora Avenue, Elizabeth, N. J. 4.9

LETTERPRESS—Little Giant · Kelly C · Kelly 3

SHEET-FED OFFSET—Chief presses · Mann one- and two-color and Perfector presses

WEB-FED OFFSET—ATF Webendorfer business form, publication, web color and specialty presses · collators · special attachments

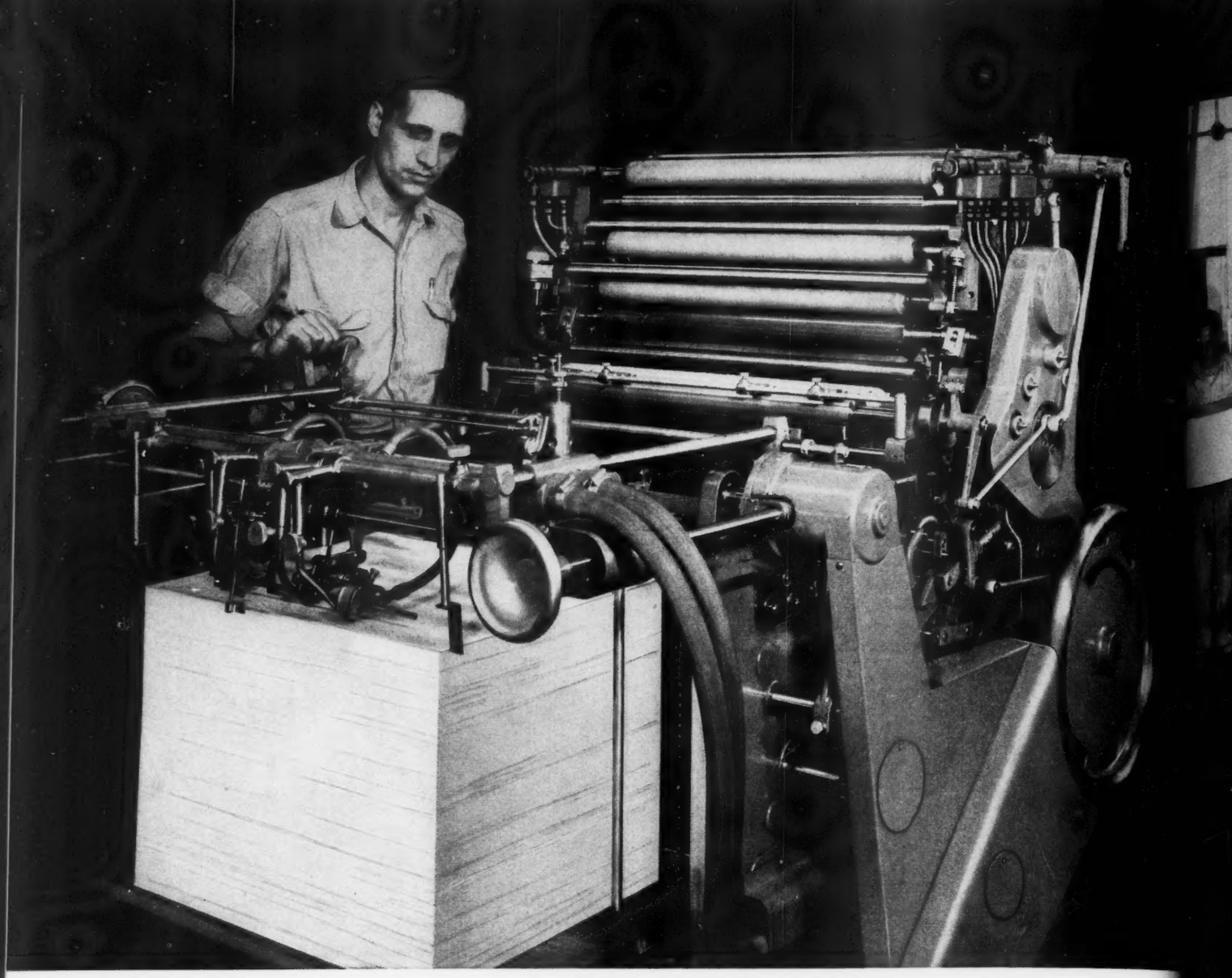
GRAVURE—ATF Klingrose rotogravure presses · rotogravure laminators · proof presses · plate-making equipment

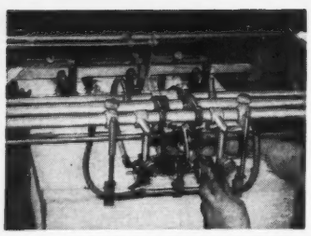
TYPE AND OTHER EQUIPMENT—Composing room, press room, non-offset, cameras, bindery equipment

BETTER, MORE PROFITABLE PRINTING FROM THE WIDEST LINE OF PROCESSES

Gravure . . . Letterpress . . . Offset

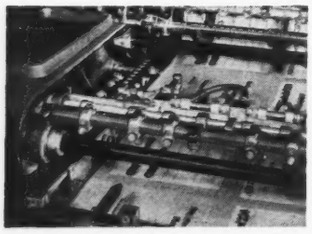
ATF



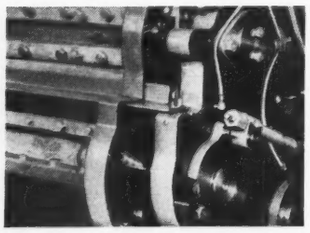


SIMPLEST AUTOMATIC STREAM FEED. Only 3 easy adjustments; no tools needed. Feeds widest range of stock; sheets from 8½" x 11" to 17¾" x 24½". Holds 16¼" pile of paper.

IMPROVED FOUNTAIN CONTROL. Twenty-five keys 1 inch apart provide finest ink control over fountain's full width, assuring proper inking of plate. Precise tint and solid coverage.



POSITIVE CHAIN DELIVERY. Delivers any paper—onion skin to 6-ply card—in straight, smooth piles. Guards protect pressman but permit easy access. Delivery capacity: 16½".



HELICAL GEARS AND CYLINDER BEARERS. Ground to extreme accuracy, gears are made from finest steel. Drive gears are quiet, long-wearing. Hand lever oils automatically.

Have you seen the ATF Chief 24?

If you are considering a press for jobs in the 17 x 22 size range, be sure that you check into the ATF Chief 24. In all areas in which this press has been placed in operation, additional installations have soon resulted.

Here's why. The Chief 24 contains every feature we could think of that makes it easier to operate and maintain. You get a steady, high (to 6000 IPH) and dependable rate of daily output. And you get it at an initial cost lower than any press of similar size and quality.

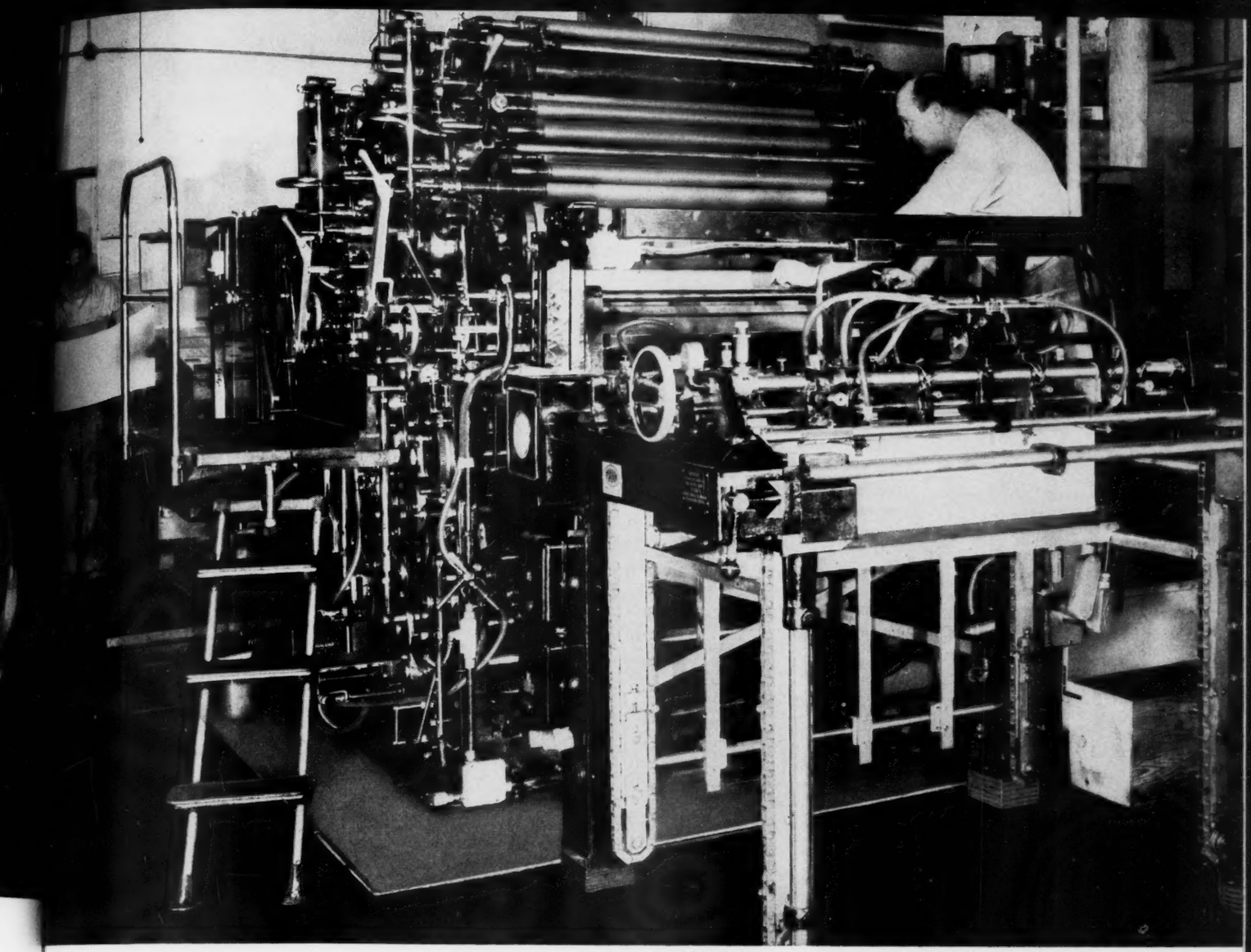
Take a look at the close-ups of some of the Chief 24's features. Each one, from the Quick-Set *Automatic Stream Feeder* to the Positive Chain Delivery, is there for just one reason—to help provide efficient, tireless operation and less downtime for adjustment.

Your ATF rep is waiting to tell you more about the Chief 24. Or about the complete line of Chiefs—14 x 20, 17 x 22, 17 x 24 and 22 x 29. American Type Founders, *a subsidiary of Daystrom, Inc.*, 200 Elmora Avenue, Elizabeth, N. J.

BETTER, MORE PROFITABLE PRINTING FROM THE WIDEST LINE OF PROCESSES

Gravure...Letterpress...Offset

ATF



LASKY COMPANY'S SECOND 2-COLOR MANN gets ready to go to work as press foreman, Charles Wheeler, sets up for a job on it.

"Our 1st Mann press sold us our 2nd"

"We were a little nervous about our first 2-color Mann," Saul Lasky of Newark, New Jersey's Lasky Company admits, "but it took only one year's experience with our Mann to convince us we made a good move.

"It earned money for us, boosted production, and gave us uniformly high-quality presswork. So the decision to install our second Mann came a lot easier."

And Charles Wheeler, Lasky's press foreman, is even more specific about the job the new Manns are doing. "The ink distribution lets you print solids as easily as a few lines of type—without streaks, ghosting or fade-out," he states. And he goes on to say:

"We're sure of perfect register at *any* speed—on the Mann there's no transfer of the sheet between colors. And you can back up jobs faster with no register cams to mark up the face of the sheet."

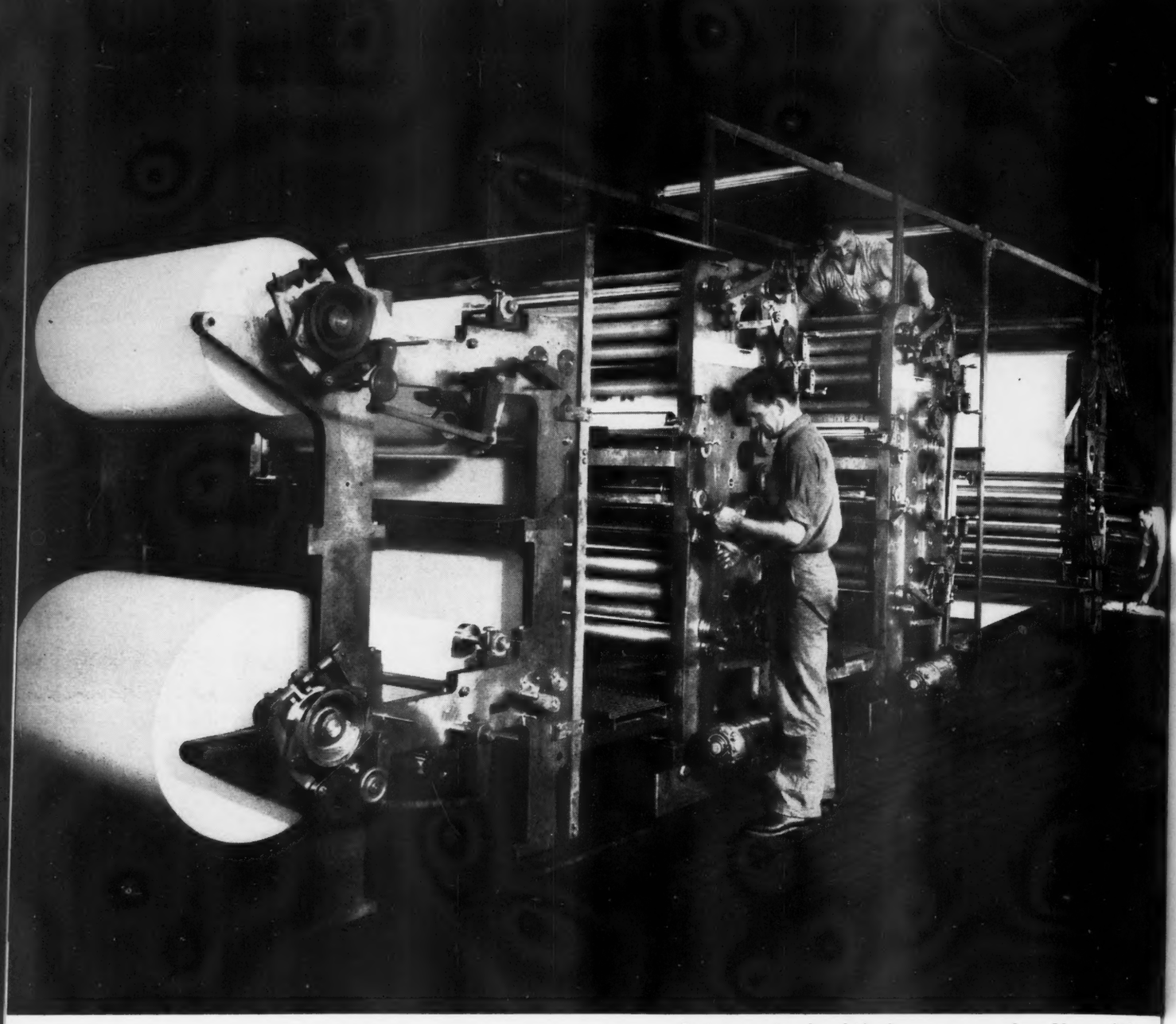
For facts on Mann features, check your ATF representative. Or write for the latest folder "Offset Unlimited" covering all sizes of Mann 1-color, 2-color and Perfector presses. American Type Founders, *a subsidiary of Daystrom, Inc.*, 200 Elmora Avenue, Elizabeth, New Jersey.

M.4.2

ATF

BETTER, MORE PROFITABLE PRINTING FROM THE WIDEST LINE OF PROCESSES

Gravure...Letterpress...Offset



Books, magazines, broadsides, house organs, catalogs—Mercury Litho puts them all on an ATF Webendorfer like the one shown here.

The press that made too much work for itself

Here's how one web-fed ATF Webendorfer Press brought in so much new business for a New York lithographer that he had to add another.

Mercury Lithographing Corporation installed their original web-fed publication press to speed production of circulars that their medium-sized sheet-fed presses couldn't turn out fast enough.

This press is capable of turning out up to 12,000 16-page tabloid signatures an hour.

With that kind of production, cost per copy hit rock bottom. This gave Mercury such a selling edge that their increased business not only kept the first ATF press busy full-time—it forced them to install another!

"Today," says Henry Levine, Mercury's president, "we're running books, magazines, broadsides, house organs and catalogs on our ATF web press. And we're keeping our original sheet-fed presses busy on shorter runs."

If you're interested in bringing in or turning out more work than your present equipment can handle, write for ATF's free fact-filled booklet on Webendorfer Publication Presses—American Type Founders, Mt. Vernon Division, *a subsidiary of Daystrom, Inc.*, Mount Vernon, N. Y. W.4.1

ATF

BETTER, MORE PROFITABLE PRINTING FROM THE WIDEST LINE OF PROCESSES

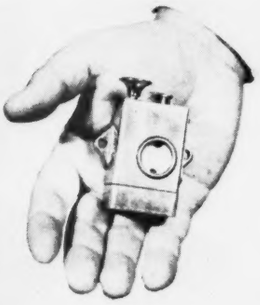
Gravure..Letterpress..Offset..Flexographic

Equipment & Supplies

(Continued from Page 30)

and rotary index tables. Other applications may be found for equipment used in the printing industry.

The L Special is comprised of a reservoir, filter, pump and Meter-Units. It



measures 1½ in. by 2¼ in. by 1⅜ in. deep. The reservoir holds 20 cc. of lubricant and the pump can be adjusted to discharge a total of 0.6 cc., 0.45 cc., or 0.3 cc. each time the plunger is pulled.

The L Special may be installed to discharge into passages drilled in the machine and leading to the lubrication points, or it may discharge into tubing leading to these points. When used on machines having drilled passages, up to four Meter-Units are installed inside the body of the lubricator, and the unit is mounted so the Meter-Units proportion lubricant into the various passages in varying amounts, depending upon the requirements of each bearing served.

In cases where tubing is used, a single tube leads from a tapped hole in the base of the lubricator to a junction from which branch lines lead to the lubrication points. The Meter-Units can be located either at the junction or at the point of lubrication.

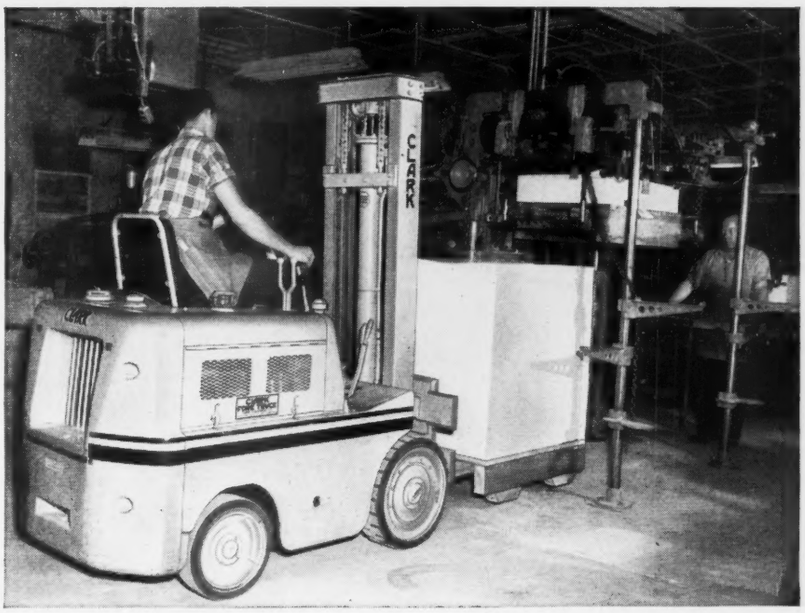
The lubricator is made of polished diecast aluminum. A one-piece ⅝ in. diam. window in front of the reservoir acts as a sight gauge to indicate oil level within the reservoir. If further details are desired, please ask for PEE No. 251 in your request.

Pre-sensitized Grained Offset Plate

Polychrome Corporation announces a pre-sensitized offset metal plate. It is called Granekote and is designed for use on duplicating and offset presses.

The following claims are made by sponsor: (1) Granekote can be made ready for press in seconds by desensitizing after exposure and washing with water. Plate can be rolled up and printed immediately with halftones for a minimum of 5000 copies. (2) Or Granekote can be developed with Polychrome's developing ink which will give top quality runs up to 1000 impressions. (3) Developing lacquer may be used which will assure quality runs up to 25,000 impressions. Reports have come into the factory of runs up to 90,000 impressions. (4) Deletions can be made by honing. Additions may be made on press if necessary by drawing on the plate with a 3H or 4H pencil. These

(Continued on Page 69)



Paper is fed directly into the presses without touching or re-jogging

"Our Clark truck paid for itself in less than a year"

says BILL LAWSON, President Lawson Printers, Inc.

"I operate a letterpress shop in Battle Creek, Mich. We employ 17 people, handle approximately 10,000 pounds of coated papers a week. Before we bought our Clark truck, all handling was manual: a very expensive way to use high-priced men—slow, damaged paper, too much down-time for presses.

"Now it's different. We specify all shipments 'banded on skids same size as the sheet.' The Clark truck unloads deliveries in minutes instead of hours; stores the paper; keeps presses, cutters, folders supplied; loads delivery trucks. You can quote me—the Clark truck has made everybody happy, including me."

These benefits I like:

- better delivery service (to us)—no strain on the truck drivers.
- good housekeeping, a tidy plant—we like to show it off
- no need for a truck-well—saved me plenty!
- faster processing—presses run full cube of productivity
- paper damage virtually eliminated
- cash savings
  - —labor savings, per week $64.95
  - —skidded paper (not boxed) saves, per week 15.00
  - —Total saved—50 weeks $3397.50

It makes sense to find out how much money *you* could save in your own plant. Easy to find out—talk to your local Clark dealer, listed in the Yellow Pages.

CLARK EQUIPMENT

Industrial Truck Division
CLARK EQUIPMENT COMPANY
Battle Creek 151, Michigan

Uncle Mat Says:

a a A a a a A a A a a

"THE GREATER THE VARIETY OF TYPE FACES USED, THE GREATER THE VALUE OF MATRIX CONTRAST SERVICE"

In display composition, with its larger assortment of type faces and sorts, the use of Matrix Contrast Colors will give you great savings in linecasting operation... a bonus that newspapers and job shops with a variety of type faces receive when adopting Matrix Contrast Service.

When the reference marks are treated in bright contrasting colors such as red, green, yellow, orange, or white, the clear-cut characters show any variation in colors immediately. The occurrence of wrong fonts is eliminated and pi mats are selected with assurance. With the squint taken out of his work, the operator delivers a greater quantity and a better quality of composition.

Take it from your old Uncle Mat...

not one but five persons are pleased when Matrix Contrast Service is installed... the operator, the machinist, the employer, the reader, and the advertiser.

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BLAME *for loss of letterpress business laid to all branches of process.—Gardner hits critics who say: "It's all photoengravers' fault."*

By RICHARD W. GARDNER*

*Jahn and Ollier Engraving Co., Chicago. Abstracted from an address delivered before the Letterpress Presswork Clinic at the 35th Annual Convention of the Intl. Assoc. of Printing House Craftsmen, Philadelphia, August 1954.

WE IN the photoengraving branch of the letterpress industry are certainly as guilty as any of the others in losing sight of the fact that we must work closely together if we are to master the problems presented by our ever increasing competition. The fact that we have lost and are losing business to other processes cannot, and should not, be blamed on any one group. On the other hand, we should all be ready and willing to recognize that each of us has a responsibility for correcting weaknesses within our group and such corrections must be made in cooperation with those following us in the line of operations.

Not All Photoengravers' Fault

It has often been charged that one of the reasons for loss of letterpress business to competitive processes is due to the high cost of plates produced by photoengravers. There can be no complete denial of this charge by us, because since 1945 labor and material costs have risen drastically and rapidly. However, this has been equally true for industry generally including all other branches of the letterpress industry.

It has been further charged that photoengravers have not been as progressive as their counterparts in platemaking techniques. This charge cannot be denied in toto nor is it entirely true.

Deterioration in Copy

A major factor affecting plate costs and quality is the relative deterioration in the quality of copy given to the photoengraver for reproduction. For today's high speed cylinder and rotary presses, printing on papers of machine finished surfaces with inks of less saturation, such copy presents the photoengraver with problems which are almost insurmountable in preparing plates which are required to run under these conditions.

Copy and layouts are usually prepared to satisfy a client who knows little or nothing of how it will reproduce on paper by photomechanical means. If he is sold something of this nature or insists upon it, ultimate dissatisfaction with letterpress must be the inevitable result.

In black and white work, soft vignettes look well on layouts, but present problems all down the line to those who must reproduce them. Photographs generally are being made for their pictorial values rather than their reproducibility. Contrast is judged by strong whites and blacks rather than for sharpness of definition of adjacent tones which is much more desirable.

Why Not Consult Photoengraver?

Almost never is the photoengraver given an opportunity to review the problem of how he would like copy prepared to enable him to achieve the desired result in the most economical manner, or to say in advance that a specified effect in the layout cannot be achieved satisfactorily. Too many people tell us to do the best we can until they see a proof, then ask for corrections and modifications which bring about costs far out of proportion to results achieved.

Drastic Problems in Color Work

Colored art almost invariably includes colors which cannot be reproduced by four color process inks. The results of the "do the best you can" attitude are usually accepted only as a bad compromise and only when schedules force it or the photoengraver says he can't do anything further without ruining the plates.

In photographic color copy, there is almost invariably more contrast than can be reproduced satisfactorily by photo-

Phototypography —What Is It?

(Abstracted from address delivered by Carl P. Palmer, Printing Div., E. I. du Pont de Nemours & Co., Wilmington, Del., before convention of Intl. Assoc. of Printing House Craftsmen, Hotel Bellevue-Stratford, Philadelphia, August 1954)

PHOTOTYPOGRAPHY consists of a process of thinking involving the entire field of preparation from the conception of a printed piece to the point where the printer is handed suitable materials from which to reproduce the job. It involves the proper planning of layout, art and mechanicals coupled with the integrated execution of typography to fit those plans. Fail in these steps and disaster is likely to result.

mechanical means on paper with printing inks. This is especially true of color transparencies. The higher tone and color contrast give a more pleasing pictorial effect, but presents to the photoengraver serious problems of contrast reduction and under-color removal which have added to plate cost.

Another serious problem connected with the presentation of transparencies is the lack of standard sources of illumination for viewing such subjects. The color and intensity of viewing sources and variations in them often raise almost irreconcilable differences of opinion as to what constitutes a suitable reproduction and the same holds true for viewing of proofs.

Selection of the art medium to be used often presents serious and costly problems to the photoengraver and results in dissatisfaction to the customer. The decision to use line or tone or photographs is too often based on aesthetic desire rather than knowledge of reproducibility to give a desired result.

Failure of Electrotypers

Failure on the part of the electrotyper to provide specifications as to his requirements often results in costly misunderstandings and loss of quality in the finished results. It is quite confusing to send out plates which are acceptable to one foundry and have them rejected by another.

There is one practice by the electrotyper which is especially dangerous. That is, cleaning plates with metal wire brushes. Such treatment tends to destroy color especially in middletone areas through the breaking of fine connectors. Plates can be made grease free with commercially available solvents, thus eliminating the necessity for such brushing.

Inadequacy on Part of Printer

The printer who should be most vitally interested in the photoengraver's work often puts him on the spot through failure to specify inks, stock, screen ruling, etc., or if he does so specify, often does not provide the information until the job is well underway. Ink rotation, whether single color, two-color or four-color wet printing, are other factors which should be given to the photoengraver before the plates are started. The "we don't know" answer isn't good enough because competitive processes require similar specific information before starting a job.

Photoengravers Frown on Control and Standards

Historically, photoengraving has been a process relying to a very large degree on manual skill and individual judgment. There has never been any large degree of mechanization, and scientific controls and standards have been frowned upon by photoengravers because they tend to remove the process from the field of art of which it has always considered itself a part.

Since the physical appearance of the finished product of photoengraving has changed so little, almost from the time of the inception of the process, it is difficult for many in both management and labor to realize that so many changes in physical attributes of their plates are now required. I refer to requirements in the way of greater plate depth, cleaner etching, improved tone scale, etc., brought about by higher press speeds with all the attendant problems.

Requirements for Plates

High speed rotary presswork requires plates having greater depth than has been considered satisfactory heretofore. This depth calls for a straight down etch, free from shoulders and the specifications laid down by our various advertising and printing organizations must be considered as minimum requirements. This additional depth is especially important in the shadows and is required because of limitations in makeready on presses of this type.

However, if the same standards are applied to all plates, regardless of the press type, a definite forward step will be taken and the photoengraver will contribute something tangible to the letterpress industry. Deep, cleanly etched plates require less makeready and also necessitate fewer press stoppages for plate washup.

Must Put Thought Into Problem

To achieve plates of this nature will require changes in negative making and etching techniques which many photoengravers find contrary to accepted practice. However, it can be done with present materials and processes if sufficient thought and effort is put into the problem. Some newer techniques such as the Dow High Speed Etching Process seem to offer hope of even greater possibilities along this line. On the other hand, no progress can result if we insist that present methods are adequate and refuse to change to meet changing times and demands.

New Rotofilm *for replacement of carbon tissue in gravure process—Stability discussed—How processed for different methods*

By AXEL LUNDBYE*

**Research, Kable Printing Co., Mt. Morris, Ill.*

Several years ago the du Pont Company saw that if it could produce a stable material *i.e.*, dimensionally stable to temperature and humidity changes, as a replacement for the so-called carbon tissue used extensively in the gravure process, they would have something that would be welcomed by the industry.

The word carbon tissue is an old hangover from the very early days of gravure printing. The term carbon tissue had its origin in the fact that carbon black was used in the very early paper, produced first by the Autotype Company, Ltd., London, Eng., some 70 or 80 years ago.

However, it did not take long to find a substitute for the carbon black first used. The substitute was an emulsion of gelatin and pigment coated on a paper backing. Gelatin is a chemical conglomeration, never to our knowledge completely chemically analyzed. Hence, its behavior in processing is unpredictable. Also, it is placed on a paper base which in itself is changeable. Here we have a sandwich consisting of topping and base, *i.e.*, gelatin plus pigment and paper base. Both of them are sensitive to temperature and humidity changes.

It has taken many years to produce a more stable material. In the early '40s duPont came out with a film called Rotofilm. However, this early Rotofilm must not be confused with the present material. The early experimental material was what we would call color blind, and as stated, this material was known by the similar name. This early material was field tested prior to 1952 when the present Rotofilm came on the market.

The earlier Rotofilm was tried as early as 1945 by the writer, at the Crowell-Collier Pub. Co. Research Laboratory in New York, N. Y. There was indication at that time that du Pont had hit on a material more stable than the carbon tissue and therefore a good replacement for carbon tissue. Dr. Hermann Kott of Publications Corporation did some intensive work in the late '40s with the early "color blind material" and apparently was satisfied in 1950 that something could be done with Rotofilm even at this early experimental stage. He filed an application for a patent and Patent No. 2,628,903 was issued to him.

However, Dr. Kott did not obtain a patent on Rotofilm because that secret is du Pont's to a degree. However, while the latest Rotofilm coating is gelatin, du Pont has come a long way in finding as stable gelatine as we think it is possible

to secure. But how is that done, and why don't the carbon tissue people do the same? The first part of the question is easy to explain. Du Pont found quickly that gelatine, even though made from calf skins, is not the same if the calves came from different parts of the country. They soon found that to produce as nearly stable and homogeneous gelatine it was absolutely necessary to have control of the raw material, the calves and their skins, and absolute control of the blending of the gelatins. By doing that, du Pont keeps the coating on Rotofilm more continuously homogeneous. What Dr. Kott did was to develop a process to use the du Pont Rotofilm, or as Dr. Kott called it "Preparation of printing plates and cylinders with a compound of chlorobromide with some elements or radical." He maintains that by using this new orthochromatic resist-forming film (let us put the last five words into English) one is capable of "producing tone value in a photograph corresponding to the tone in nature". Anyway, Dr. Kott is obtaining some exceptional results. But it must be remembered he has produced some expensive equipment, relatively speaking, to obtain this result. We understand Alco Gravure in Chicago is using nearly 100%; Alco Gravure, in Hoboken, N. J., will soon be doing the same, and Crowell-Collier Pub. Co. in Springfield, O., will soon be going into production on the same basis.

However, let us make it clear and absolutely clear, the du Pont Rotofilm can be used by anyone without interfering with Dr. Kott's patent, because his patent covers only one method of using Rotofilm.

It must be remembered that any time we try something new in our plants, it always will take a few experimental trials before we get used to it. Should you want to experiment with Rotofilm, don't expect results the first few times. Give the material and your personnel a chance to get acquainted. E. I. du Pont deNemours & Co. maintains competent technical personnel able and willing to help you.

There is the possibility that some slight changes in the densities of positives used with Rotofilm will have to be made but at the present is not a certainty.

Color Temperature

One important thing should be brought up here, namely, color temperature, which is important. Let us give a little example:

The color temperature of a 75 w. or 150 w. filament lamp we will assume to be 2900 Kelvin.

The color temperature of such a lamp at a line voltage of 115-120 v. tungsten lamp, is related to the applied voltage by the equation shown below.

The capitals represent normal value. The relationship applies only for voltage not too far from normal rated voltage.

From the equation above it can readily be seen that a slight change in voltage will change the color temperature considerably. Therefore, on all electrical circuits being used for photographing, carbon printing and Rotofilm printing, it is mandatory to have voltage regulators, or as some people call them, voltage stabilizers. Let us remember that a light intergrating meter is far from being the answer. It is not the amount of light which we can measure with a light integrating meter that is the most important, but the determining factor is the amount of light of the right color temperature.

$$\frac{\text{LINE VOLTAGE}}{\text{Actual voltage}} = \left(\frac{\text{FILAMENT COLOR TEMPERATURE}}{\text{Actual color temperature}}\right)^{2.7}$$

Sales Overhaul for Hamilton—The entire field sales organization of Hamilton Mfg. Co. recently spent a week at the firm's Two Rivers, Wis., headquarters learning details of a new sales and service plan inaugurated by the 74 year old company. The following company officials addressed the group: E. P. Hamilton, President; R. G. Halvorsen, Vice Pres.; and H. G. Evans, Senior Vice Pres. Composing room planning and equipment marketing was covered by V. F. Hall, Professional Div. Sales Mgr., and R. L. Perry, Sales Promotion Mgr. Appointments made under the new plan include R. T. Hoopes as Sales Coordinator and C. W. Altmann as Product Service Mgr. The group is shown above at the meeting. All names read from left to right. Front row: R. G. E. Cornish, Perry, Hall, R. W. Brunsman and C. S. Sorenson. Middle row: H. R. Morris, R. R. Cogswell, R. M. Giblin and W. G. Baustert. Back row: N. L. Johnson, R. E. Klinkner and H. A. Nack.

du Pont Rotofilm

A light-sensitive material which promises to simplify gravure printing, allow reproduction of higher quality, and reduce color printing costs has been developed by the du Pont Photo Products Dept.

The material, known as du Pont Rotofilm, is pre-sensitized to eliminate the time and space-consuming sensitizing operation previously needed for carbon tissue in the printing plant. Pre-sensitization of Rotofilm eliminates also a health hazard involved in the use of bichromate sensitizers with conventional gravure material.

Prior to the introduction of Rotofilm, carbon tissue had to be exposed for several minutes to high-intensity, heat-generating carbon arc lamps. Rotofilm, however, can be exposed in a few seconds with incandescent light.

After the exposed Rotofilm is processed in a manner similar to that for ordinary photographic film, it may be used immediately, or can be stored for quite a period of time. Any number of copies can be made photographically from a master set of positives and mailed inexpensively in paperboard tubes, after development. That is one of the points making Rotofilm so versatile. Carbon tissue shelf life is limited if not kept under refrigeration. Therefore, after exposure, carbon tissue cannot be shipped any distance. Rotofilm can be shipped from coast to coast from which to make duplicate cylinders. When shipping positive carbon tissue on fragile glass plates, it will be nearly impossible to get the same details and color density in case it is necessary to make another set of positive plates. Rotofilm offers a decided advantage to publications which have editions printed on presses located in plants in different parts of the country.

The use of Rotofilm, according to du Pont technicians, allows better reproduction quality than does the commonly used carbon tissue resist, in that sharper detail and improved tonal values can be attained. Although the initial cost of the du Pont film is greater than that of carbon tissue, the saving made possible by Rotofilm, from otherwise wasted material and time required to remake unsatisfactory cylinders, more than makes up the cost difference.

Advantages Listed By Maker

The du Pont Company lists the following advantages for Rotofilm not applicable to previous gravure resist material:

(1.) Permits greater ability to control results through mechanized process-

(*Continued on Page 72*)

Phototypesetting at Warwick Plant

WARWICK Typographers, St. Louis, Mo., recently installed its fourth Intertype Fotosetter machine (Fig. 1). The floor plan of the plant Fig. 2) shows the extent to which the firm has been built around photocomposition. In 1936 Warwick's President, H. J. Echele, caught some of the enthusiasm surrounding the subject of phototypesetting.

In 1950 he visited the Brooklyn plant of Intertype Corporation where he saw the Fotosetter in action. After a day spent in touring the plant, Mr. Echele said: "It was love at first sight. It literally rang the bell."

Shortly after Mr. Echele's visit, Warwick acquired its first Intertype Fotosetter. It was put to work producing film for offset plates and reproduction proofs. When the possibilities began to unfold, a second Fotosetter was installed.

In 1922, when Warwick got its start, a reproduction proof was unknown, but in 1951, 60% of Warwick's business consisted of repro proofs. The Intertype Fotosetter provided Warwick with a bridge over the conventional steps between type setting and offset platemaking. The film, processed in Warwick's darkroom (see diagram Fig. 2) is supplied to the platemaker ready for photomechanical use. Before the Fotosetter, an offset job consisted of machine body composition and hand set type for the balance. The job was then assembled and repro proofs pulled and photographed.

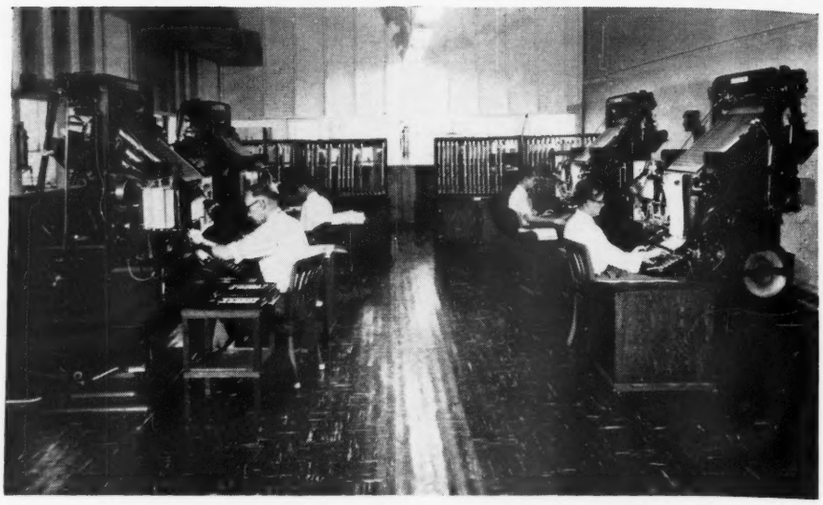


Fig. 1.—*Battery of four Intertype Fotosetter photo-typesetting machines in trade composition plant of Warwick Typographers, St. Louis. Magazine racks in the background.*

Production time is one of the valuable commodities at Warwick. Another is the firm's reputation for high quality work. "The improved quality of phototypesetting was the chief attraction for us", said Mr. Echele. "Emulsion-to-emulsion contact and full kerning are two of the many factors that enter into this improvement."

Warwick serves customers in 37 states, Puerto Rico, and Mexico, but the firm is not an industrial giant. Warwick sets ads, folders, booklets, books, letterheads, labels, advertising and sales presentations, display material for silk screen, invitations, broadsides, and other kinds of composition on the Intertype Fotosetter. Fotosetter has supplied Warwick with keys to doors previously shut. It has been helpful with streamers of reverse 144 pt. blown up from Fotosetter 12 pt. composition for 24-sheet posters, large display cards, copy for projector slides, and copy for novel perspective and 3D ad lines. The reproportioning lens is used in these last two instances.

Since its first Intertype Fotosetter installation in 1951, Warwick has added three Fotosetters (see Fig. 1). This growth has characterized the firm since its earliest days when the company's jobs were confined to magazine and newspaper advertising. Later, when Echele and Vice Pres. John Lamoureux demonstrated their ability to turn out a striking layout, requests began to arrive for booklets, folders, financial reports, house organs, and many other forms of promo-

(*Continued on Page 82*)

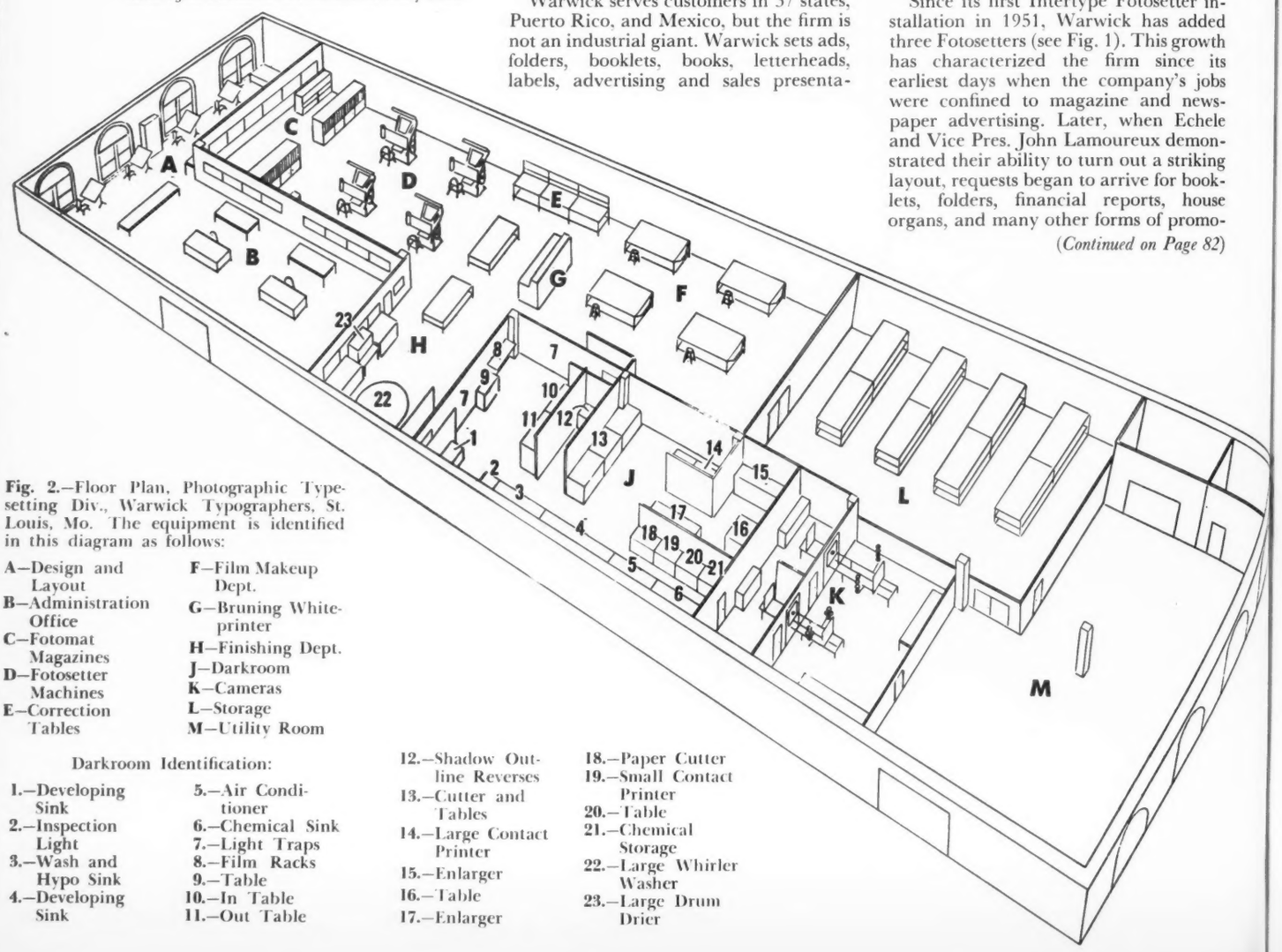


Fig. 2.—Floor Plan, Photographic Typesetting Div., Warwick Typographers, St. Louis, Mo. The equipment is identified in this diagram as follows:

A—Design and Layout
B—Administration Office
C—Fotomat Magazines
D—Fotosetter Machines
E—Correction Tables
F—Film Makeup Dept.
G—Bruning Whiteprinter
H—Finishing Dept.
J—Darkroom
K—Cameras
L—Storage
M—Utility Room

Darkroom Identification:

1.—Developing Sink
2.—Inspection Light
3.—Wash and Hypo Sink
4.—Developing Sink
5.—Air Conditioner
6.—Chemical Sink
7.—Light Traps
8.—Film Racks
9.—Table
10.—In Table
11.—Out Table
12.—Shadow Outline Reverses
13.—Cutter and Tables
14.—Large Contact Printer
15.—Enlarger
16.—Table
17.—Enlarger
18.—Paper Cutter
19.—Small Contact Printer
20.—Table
21.—Chemical Storage
22.—Large Whirler Washer
23.—Large Drum Drier

Craftsmen Study Technical Problems

Photocomposition, dry offset, magnesium plates, education, flexography and color correction among important areas explored at Philadelphia Convention

By STAFF WRITERS

PHILADELPHIA, a city which has played an important role in printing since the early days of Benjamin Franklin, extended its welcome to the Intl. Assoc. of Printing House Craftsmen on August 8-11 for the 35th Annual Convention of an organization consisting of nearly 14,000 printing executives. Meeting at the Bellvue-Stratford Hotel, approx. 850 Craftsmen and their ladies gathered at the birthplace of their Association. The four days were filled with technical sessions, business meetings, club management information, sightseeing, plant tours and entertainment.

The program was engineered under direction of Convention Chairman Ray Miller and Co-Chairman Walter B. Morawski, Vice Pres., North American Composition Co., Philadelphia.

Six Technical Clinics

Featured during the Convention were six technical clinics planned under the direction of International officers and a Philadelphia Committee headed by Harry Seeburger of Arndt, Preston, Chapin, Lamb & Keen. Topics of current interest to industry executives, such as photocomposition, dry offset, magnesium printing plates, screen process printing, Graphic Arts education, etc., were discussed by authorities in their respective fields.

The 1954 conclave elevated Thomas P. Mahoney of Chicago to Intl. President. Surprise of the Convention was the resignation for business reasons of Henry A. Schneider, Corporate Secy., Charles Francis Press, Inc., New York, N. Y., as Intl. Second Vice Pres. Elected to fill the second and third vice president vacancies in the International because of Schneider's resignation were George Wise of Cleveland and Ferd Voiland, jr., of Topewa, Kan., respectively.

1955 Convention in Cincinnati

It was announced that the 1955 Intl. Convention would be held at the Netherland-Plaza Hotel, Cincinnati, O., August 7-10. Convention Chairman is to be Lee Augustine, Vice Pres., Printing Machinery Co. Los Angeles was awarded the 1956 Convention after an invitation extended by Perry R. Long, Intl. Past Pres. from that city.

The opening session of the convention was addressed by U. S. Public Printer Raymond Blattenberger. Principal speakers at the first business meeting were John Williams, President, Williams & Marcus Co., Philadelphia, who spoke on *Today's Leadership,* and Ivan H. Peterman, Columnist, Philadelphia *Inquirer,* whose talk was entitled *Where Will Tomorrow Be Leading Us?*

Local Club Information

Craftsmen attending the convention were provided with a wealth of information on conducting activities in their local clubs. Attention was devoted at various meetings to Printing Week, membership, club bulletins, publicity and the role of club officers.

It was reported that membership in the International consists of 13,739 printing executives as of June 30, 1954, with 98 local clubs.

The Intl. Printers' Supply Salesmen's Guild staged a special luncheon program to coincide with the Convention. A large audience turned out to hear Edward McFaul speak on mental health.

The entertainment side of the Convention was highlighted by an afternoon and evening trip to Atlantic City, where many enjoyed a day on the beach.

As usual, the ladies received the careful attention of a Ladies Committee which prepared for them a special program. It was carried out under the direction of Mrs. Dot Davis, Chairman.

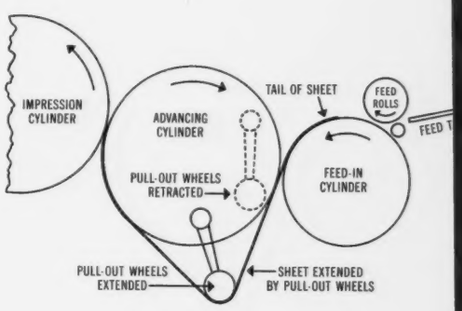
Discussions at the Craftsmen's Convention on Offset and Dry Offset problems were handled by this group of industry executives. Front row, left to right: James Basmajian, Sales Engineer, Dow Chemical Co., Midland, Mich.; Moderator Kenneth R. Burchard, Asst. Dean, School of Printing Management, Carnegie Institute of Technology, Pittsburgh, Pa.; Walter A. Kaiser, Research Engineer and Process Consultant, Edward Stern & Co., Inc., Philadelphia; and Joseph W. Mazzaferri, Partner, Colorcraft Lithoplate Co., Philadelphia. Rear row, same order: Daniel J. Gallagher, Crescent Ink & Color Co., Philadelphia; Samuel F. Chernoble, President, The Comet Press, Inc., New York, N. Y.; A. D. Kirkpatrick, Rapid Roller Co., Chicago, and Chairman Thomas P. Mahoney, Vice Pres., Regensteiner Corporation, Chicago.

Harris Model 276, two-color, 52 x 76" offset press at Excello Press, Inc., Chicago. Hedrich-Blessing photo.

HERE'S HOW HARRIS GIVES YOU EXTRA TIME TO SPLIT HAIRS

With a hundred sheets a minute flowing through a big Harris press running at speed, it hardly seems possible that there's enough time to register each and every sheet to a fraction of a hair. Yet Harris provides ample time for registering large sheets—without slowing down production—because of an exclusive method of gaining extra time for register. Harris—and only Harris—has the patented "tail pull-out wheels" which do this.

Let's take a closer look at those pull-out wheels. They are a series of small rollers recessed into the advancing cylinder. As the cylinder carries the front of the sheet forward, the pull-out wheels emerge to guide the sheet into an extended curve which smoothly accelerates the tail of the sheet to a speed faster than press speed. Then, as the wheels duck back into the cylinder, the sheet follows them up and hugs the cylinder normally. By quickly clearing the sheet from the register plate, this pull-out action gains extra time for registering the next sheet. Tail pull-out wheels are built into all large Harris presses: 42 x 58″, 50 x 72″ and 52 x 76″.



which means extra profit for the pressman

With more time to do their work, the side guide and feed rolls operate with less fussing by the pressman. And with the sheet cleared from the feed table fast, the pressman can see more of what's happening at the register plate: he has better visibility for operating control. These are two of the ways that the well-balanced, vibration-free Harris pull-out system profits the pressman.

extra profit for the plant owner

You have only to stand beside a Harris and watch the sheets as they parade down the feed table, pause at the front stops, then quick-step into the printing unit. That steady regularity of feeding and register means more good sheets in the delivery pile, more sheets the plant owner can sell.

and extra profit for the customer

The buyer of printing may not know that tail pull-out wheels are helping to give him a better run for his money. But he soon learns that a Harris-equipped shop can produce his printing the way he wants it: in fine register, in volume, on time, and at a reasonable price. All of these things mean extra profit to him.

The design and manufacture of soundly engineered graphic arts equipment is the business of Harris-Seybold. Products include Harris offset presses, Seybold power paper cutters, Cottrell letterpresses and gravure presses, Harris litho-chemicals, Macey collators, and other fine graphic arts equipment. Consult Harris-Seybold Company in all principal cities, or at 4510 East 71st Street, Cleveland 5, Ohio.

HARRIS-SEYBOLD

fine graphic arts equipment . . . for everybody's profit

These men, elected in Philadelphia, will be responsible for the conduct and activities of the Intl. Assoc. of Printing House Craftsmen in 1954-55. The new officers, from left to right, are: Treasurer, Albert L. Kolb, Manager, Printing Dept., Marine Trust Co., Buffalo, N. Y.; Second Vice Pres., George Wise, Superintendent, Dugan-Millis, Inc., Cleveland; President, Thomas P. Mahoney, Vice Pres., Regensteiner Corporation, Chicago; First Vice Pres., Amadeo R. Tommasini, Plant Mgr., University of California Press, Berkeley, Calif.; Third Vice Pres., Ferd Voiland, jr., Kansas State Printer, Topeka, Kan.

Wet or Dry Offset? Controversial Topic Discussed at Clinic

CURRENT PROBLEMS in the offset and dry offset fields were thrashed out at the 1954 convention of the Intl. Assoc. of Printing House Craftsmen held in Philadelphia. A panel of six industry executives teamed under its moderator, Kenneth R. Burchard, Asst. Dean, School of Printing Management, Carnegie Institute of Technology, Pittsburgh, Pa., to answer submitted written and oral queries. Presiding at the meeting was Intl. First Vice Pres. Thomas P Mahoney, who is a Vice Pres. of Regen steiner Corporation, Chicago.

Members of the panel handled themselves ably in responding to questions put to them by the Craftsmen audience. It was made up of the following: Walter A. Kaiser, Research Engineer and Process Consultant, Edward Stern & Co., Inc., Philadelphia; Joseph W. Mazzaferri, Partner, Colorcraft Lithoplate Co., Philadelphia; J. Basmajian, Sales Engineer, Technical Service and Development Magnesium Dept., Dow Chemical Co., Midland, Mich.; Daniel J. Gallagher, Crescent Ink & Color Co., Philadelphia; A. D. Kirkpatrick, Rapid Roller Co., Chicago; and Samuel F. Chernoble, President, The Comet Press, Inc., New York, N. Y.

Dry Offset Not the Answer

After preliminary remarks by the panel members, Prof. Burchard expressed the opinion that developments in planographic plates will enable the offset process to retain its lead in usage over dry offset printing. He acknowledged, however, that the dry offset process still has a definite place among reproduction methods used in the Graphic Arts. The moderator remarked that this was especially true where long press runs are necessary. But he implied there was yet no evidence available that it is to be the process to take the place of offset lithography.

Among the other opening statements, Mr. Chernoble said his firm is able to print by the dry offset process just as fast as the presses will go. Four dry offset presses are in operation at his plant and they have printed up to 150 line screen halftones, he added.

Gallagher, representing the inkmakers in the group, thought the printing industry was slow in grasping some of the new developments in industrial chemistry. He described industrial chemistry as a vast field in which the making of printing ink is a very small part.

Speaking on the use of quality control in printing plants, Kaiser said the real aim of such an operation is not to produce perfection in printing but rather to produce standards for the workmen to follow.

Not Quite the Same

Dry offset printing is the nicest form of reproduction outside of having children, maintained Samuel F. Chernoble, President, The Comet Press, Inc., New York, N. Y., at the Philadelphia Craftsmen's Convention. Remarking on human and atmospheric variables encountered, Chernoble quipped "... with either offset or dry offset there is humidity or stupidity in the air."

Use of Magnesium Plates

Speaking on the development of magnesium by the Dow Chemical Co. for use in the Graphic Arts Industry, James Basmajian claimed that more than one-fourth of the commercial and newspaper engravers in this country and Canada are using the metal to some degree. He said that Dow's research program on magnesium printing plates was in the laboratory stage for five years. The speaker emphasized that whether or not the Dow Rapid Etch Process or conventional etching methods are used, the magnesium metal can be used for making a number of different types of letterpress and dry offset printing plates.

Establishing Combination Plant

One of the first questions was submitted by a letterpress executive who asked if he should go into the offset field and establish a combination printing plant. The answer to such a query, thought the panel, can be found in the sales department of any letterpress printing firm. The consensus of opinion was that if there is a market for offset printing in the area then the company should go into it. It was emphasized that a clearly defined market must first exist before the decision is made. Speaking from his firm's experience, Chernoble added that when he saw work going into other plants producing offset printing he decided to enter the offset field. It was a matter of self-preservation, he said.

Moderator Burchard then asked the panel how much equipment should be purchased by a printing plant owner about to go into the offset process. Mazzaferri thought it depended upon the volume of work to be done. He advised that if an offset plant is able to keep platemaking equipment busy for 60% of the time then it is a worthwhile investment. Kaiser stated that trade platemaking service is too readily available to justify the installation of preparatory

equipment as the first step in going into offset printing operations.

Investigating Web Presses

Determining when to use web fed offset presses in combination with sheet fed offset presses, formed another subject for discussion. Kirkpatrick said the answer requires considerable investigation into the type of work which is available to the particular plant. Web offset printing, he thought, was limited in some respects. It has an advantage, he added, in that it usually can do the complete job in one operation.

Continuing, the roller representative on the panel advised evaluating the field available for web offset work. Consult with press manufacturers as to the type of equipment needed for the particular work to be done. Basically, he said, it boils down to being designed for plants performing a specialty operation. He also claimed to have seen examples of web offset printing rivaling work turned out on sheet fed offset presses. Burchard summed it up by saying a company should have a specialty product and a large volume to justify the installation of web offset equipment.

Rapid Etch Process Hit

Sharp and outspoken criticism of Dow Chemical Co.'s handling of the Dow Rapid Etching Process used for making magnesium dry offset plates came from several sources during the session devoted to offset and dry offset problems. The company was accused by one Craftsman present of holding back the use of dry offset printing by making it necessary to secure a license to use the Dow process. He said he had recollections of when the Dow firm entered the Graphic Arts seeking information from its members on platemaking problems. He further charged that Dow is now asking payment for what has been found.

Representing the Dow Chemical Co. on the panel, Basmajian reminded those in the audience that Dow has spent a large sum of money in research on the etching problem and developing the Rapid Etch Process. The licensing procedure, he said, was its method of getting back some of this huge outlay. Prof. Burchard closed further discussion on the controversial subject by saying he was sure Basmajian would convey to Dow officials the feelings expressed at the meeting.

Presses and Inks

The advantages of single color presses against multicolor presses in offset printing were also weighed by the discussion group. Kaiser related that in the Stern plant it has been found that production of four-color work is handled more efficiently on two two-color presses rather than on a four-color press.

Gallagher was asked whether inks should be doctored or used directly as they come in the can. His answer included the statement that the average printing plant encounters many variables on the press which must be compensated for in the inks. He advised not to doctor printing ink without first consulting the ink manufacturer or unless the pressman knows what he's doing.

He was then asked if he didn't think the inks could be handled more skillfully if the ink companies put the ingredients on the label of each ink can. Gallagher said he thought the problem could be solved through better and closer relations between the inkmaker and printer. An understanding of each other's problems is a requisite.

Pre-sensitized Plates for Future

One Craftsman wanted to know if presensitized offset plates will eventually be universally used in place of plates made by conventional methods. Mazzaferri replied in the affirmative but qualified his answer by stating wether it will be in the same form they are available today remains to be seen.

The panel then was asked whether a printing company should consider going into dry offset where press runs are comparatively small. Chernoble replied the Comet Press has successfully used the dry offset processs for press runs as low as 500 impressions.

Water Control

Recent developments in water control on offset presses was another topic put to the panel group. A representative of American Type Founders in the audience provided a description of the recently announced ATF Aqua-Trol unit. The device is designed to control the excess moisture on an offset printing press which normally finds its way into the inking system and causes emulsification of the ink. Excess moisture causes loss of printing quality and reduces plate life. (Details on the Aqua-Trol Unit appeared in the August 1954 issue of *Printing Equipment Engineer.*)

"Well Done, Joe"

(Abstracted from an address delivered by John S. Williams, President, Williams & Marcus Co., Philadelphia, before the 35th Annual Convention of the Intl. Assoc. of Printing House Craftsmen, Philadelphia, August 1954)

I THINK the best possible definition, in the fewest words, of leadership, is the ability to be personal about impersonal things, and to be impersonal about personalities. If a man does a good job, slap him on the back and say, "Well done, Joe". If, however, personal likes and dislikes crop up in your organization, they must be treated absolutely impersonally.

Photocomposition Usage is Related at Craftsman's Meet

PHOTOTYPESETTING, while still in its infancy, is developing rapidly. This was indicated by the enthusiastic discussions occurring at the Photocomposition Clinic of the Intl. Assoc. of Printing House Craftsmen's Convention in Philadelphia on Monday, August 9. Henry A. Schneider, Intl. Second Vice Pres., opened the Photocomposition Clinic by introducing Frank M. Sherman, Executive Director of the Intl. Typographic Composition Assoc. Sherman presided throughout the balance of the meeting.

In his remarks, Sherman reviewed phototypesetting efforts from the time it was originated approx. 50 years ago. He stated that presently there are from 100 to 125 Fotosetters in use in from 50 to 60 plants in the United States. He also remarked that presently Philadelphia is the center of the expanding phototypesetting industry, since there are three complete plants in that city using Fotosetters, the Hadego Machine, regular and special camera equipment with which to produce phototypeset film or paper positives and/or negatives for clients.

Chairman Sherman introduced the panel of speakers. These were: Albert Tate, Mgr., Photocomposition Div., Typographic Service Co., Philadelphia; George E. Nelson, Philadelphia Sales Mgr., Lanston Monotype Co.; C. P. Palmer, Printing Div., E. I. du Pont de

Shown from left to right here are the speakers at the Photocomposition Clinic which was held during the Intl. Craftsmen's Convention. They are: Alfred Belotti, Superintendent, McLean Bros., Ltd., Montreal, Can.; Joseph W. Costello, jr., Art and Type Director, Progressive Composition Co., Philadelphia; Frank M. Sherman, Exec. Secy., Intl. Typographic Composition Assoc., Philadelphia; Chairman Henry A. Schneider, Corporate Secretary, Charles Francis Press, Inc., New York, N. Y.; C. P. Palmer, Printing Director, E. I. du Pont de Nemours & Co., Wilmington, Del.; and Albert Tate, Manager, Photocomposition Div., Typographic Service Co., Philadelphia.

Nemours & Co., Wilmington, Del.; Joseph K. Costello, jr., Art and Type Director, Progressive Composition Co., Philadelphia, and Alf. Bellotti, Supt., McLean Bros., Ltd., Montreal, Canada.

Variety of Equipment

Albert Tate, the first speaker, stated that Typographic Service's photographic composition is being set on five Fotosetters, a Hadego machine, a Filmotype machine and a Fotomaster camera. These machines, he explained, are operated on a 24 hr. round the clock basis.

All types of composition have been handled such as folders, broadside advertisements, sales portfolios, T. V. slides, posters and books.

Changing Complexion of Industry

In discussing the subject *What is Phototypography?* Carl P. Palmer, Printing Div., E. I. du Pont de Nemours & Co., Inc., made a number of interesting observations as the result of his investigation of phototypesetting as well as working with the product for his company. He asserted that the invention of phototypography is as revolutionary as the invention of movable types. In commenting upon the transition which has taken place in the trade typography field he said: "Trade typographers found that where once the bulk of their work was for use on press as type, or was locked up for foundry, now their work consists of furnishing reproduction proofs for the cameras of the lithographers, engravers and gravure shops."

With respect to type reproduction for photomechanical work, Palmer made this interesting observation: "No one has ever pulled a perfect reproduction proof from type. No one can say that he hasn't had his share of the headaches that go with reproduction proofing. The perfect reproduction from type is only possible by holding the character in a flame, collecting a deposit of pure carbon on it, and then with perfect impression, transferring that deposit to a sheet of dull-coated book paper. That image has no squeeze-out, no impression, no gloss and is even in color. That image can be blown away by the merest breath or smudged beyond all recognition."

In pursuing his discussion, Palmer mentioned the five basic approaches to the problem of transferring the uncomposed letter from a master alphabet to a composed message. Typographers, generally, failed to recognize that when they photograph an object they are making a recording of light. Hence, when a reproduction proof of type is photographed actually it consists of the photograph of the paper the type was printed on. The images of the characters are outlined in white and are then only as true as the absence of light in the characters themselves.

Palmer asserted that the sound approaches to phototypography all use master alphabets in negative form. The machines in use today with one notable exception (the Hadego) follow this principle.

Five Engineering Concepts

The five fundamental engineering concepts that all phototypographic machines fall into are:

(1) Circulating matrix or matrix handler approach such as Fotosetter, Rotofoto and Monophoto; (2) Sprinning disk or spinning cylinder approach such as the Photon; (3) The directed mirror approach like Huebner and others; (4) The video tube or pure electronic approach such as the Linotype, and (5) The static character projection approach as used in Linofilm.

In reviewing what he called "basic economic facts", Palmer said: "Perfect composition is best achieved by setting foundry type by hand. This is also the most expensive way of setting type. Monotype gives us a cheaper way with some loss aesthetically. Slug line composition gives us the least expensive way to set type but with a still further loss aesthetically. It costs less to handle the product of linecasting machines once off the machine. Now we have in phototypography a product coming off the machines which promises to be cheaper to handle and in most instances we have regained some of the aesthetic losses."

Planning is Essential

One of the most important sections of Palmer's address was that related to the planning and execution phases of phototypesetting. He said that phototypography is the process made up of a series of interlocking steps of procedure which, when planned and executed in proper sequence, will produce good quality results and effects heretofore not feasible at low cost.

"Normally," pursued the speaker, "When art work and mechanicals are prepared for the printer the artist pastes reproduction proofs of the type into position on the mechanicals. If the job is a multi-color one, he has to prepare overlay, breaking up for color, one complete color per overlay. He may have to cut his proofs up into pieces to properly space them. He has no way of determining his elements except by measurement. Errors of positioning are not readily detected until the printer submits a proof made from a series of made-up or stripped film negatives. By this time the job is too far along and changes become very costly.

"Regardless of the process, corrections cost money. We have experienced lower correction costs using phototypography, as the bugs are removed beforehand, because of planning which is so vital a part of the process."

Palmer then told about the handling of composition. In phototypography the type is set in galley form on film, black letters on a clear film base. The paragraphs and elements are spaced out over the artists translucent layout. Measurements are required but accuracy is assured. Color breakup is accomplished accurately and quickly by simple masking techniques. The compositor is reading right side up at all times. He can't smear the proofs and he doesn't have to

SALESMEN'S GUILD ELECTS

The annual dinner meeting of the Intl. Supply Salesmen's Guild was held at Hotel Bellevue-Stratford, Philadelphia, Wednesday, August 11 during the Intl. Craftsmen's Convention. Edward McFall addressed the assemblage consisting of manufacturer and supplier sales representatives together with a liberal sprinkling of Craftsman delegates.

Norman L. Rowe, New York Manager for Ideal Roller & Mfg. Co., presided. Rowe has served two terms as president of the sales group.

Lee Augustine, Vice Pres., Printing Machinery Co, Cincinnati, was advanced from the first vice presidency to president. Howard Colehauer was elected first vice president of the Guild. Colehauer is president of Jomac, Inc., and vice president of Godfrey Roller Co., both firms being located in Philadelphia. Perry R. Long, Bryan-Brandenurg Co., Los Angeles, was re-elected second vice president. Damon Moore (Miehle Representative), 1513 Corinth St., Dallas, Tex., was elected secretary. Louis A Croplis, New York manager for American Type Founders, Inc., was selected to serve as treasurer.

While not announced officially, it is anticipated that the 1955 meeting of the Guild will take place during the convention of the Intl. Assoc. of Printing House Craftsmen, Cincinnati, Netherland-Plaza Hotel, Aug. 7-10 inc.

Prize Craftsman Convention Photograph—A sparking personality at the Intl. Craftsman's Convention in Philadelphia was Dorothy (Dot) Davis, Chairman of the Ladies' Committee. Petite Mrs. Davis proved to be a gracious hostess in looking after visitors' needs and directing the women's program. As shown in this picture, the photographer caught her as she displayed exuberant enthusiasm while addressing the ladies at the opening session. She is the photogenic wife of Intl. Fourth District Representative Eugene H. Davis, Branch Mgr., Interchemical Corp., Printing Ink Div.

The traditional midnite caucus in Philadelphia for nomination of Intl. Craftsmen officers and convention cities found the officials of the meeting expressing a variety of moods. From left to right are: Abel O. Norbeck, Lewis Roberts, Inc., Minneapolis, Minn.; Chairman Basil M. Parsons, Secretary, Thomson-national Press Co., Franklin, Mass.; Harold Sanger, Board of Education, Chicago; Pearl E. Oldt, Intl. Executive Secy., Cincinnati, O.; and Don Bennitt, Manager, Western Bindery, Oklahoma City, Okla.

sort out a set of even toned proofs or spot-up poor characters.

Nelson Discusses Monophoto

George E. Nelson, Philadelphia Sales Mgr. of Lanston Monotype Machine Co., discussed the Monophoto phototypesetting machine. The Monotype Corporation in England, Nelson stated, recognized the trend toward photographic typesetting over 20 years ago and set as its objectives a machine that would fully utilize the skill of existing operators and associated personnel by providing mechanisms and procedures with which they were thoroughly familiar. Nelson reported that the necessary tooling, patterns and fixtures for quantity standardized production have been completed in England. Field tests of the Monophoto have been carried on in England for some time. He reported that the first commercial machine will be installed in the Philadelphia area in September.

Nelson continued: "As in the Monotype hot-metal typesetting machine, the manual operation of transcribing the copy is divorced from the automatic mechanical photographic operation. The photographic unit is controlled by the perforated controller paper ribbon produced on the keyboard unit. The same set sizing and justifying principle is used in the Monophoto as in the hot metal casting machine. The equivalent of a hot metal caster, the Monophoto is actuated by the perforated paper ribbon prepared on the Monotype keyboard that controls the mechanism which locates the wedges and the photo matrix case so that the required character will be in correct position for photography. Where the Monotype hot metal composition caster uses a centering pin to locate the individual matrix for casting, the Monophoto machine obtains the equivalent position by use of racks along the margins of the photo matrix case.

"Any commercial photomechanical film or sensitized paper can also be used on the Monophoto machine. This includes thin or thick base film, strip film, or bromide paper of the desired size selected to fit the cut, page or galley length desired and in any width up to 60 pica em composition.

Prime Photography

"Composition by individual characters, the unit system of values, facilitates for automatic centering and quadding, the line killer for keyboard and the wide measure are retained in the Monophoto machine. The Monophoto product is also prime photography as are the corrections that are included in the original composition, with the consequence that top character definition and quality are retained without loss of detail."

One of the interesting comments made by Nelson during his address is as follows: "High quality of the composition results from prime photography and structural rigidity of the Monophoto machine, as the entire optical system is immobilized during the interval of exposure."

(Editor's note—See November 1952 issue of *Printing Equipment Engineer,* p. 32 for full description and illustration of the Monophoto photographing unit. See also p. 36 of July 1954 issue of *Printing Equipment Engineer* for production data regarding the Monophoto.)

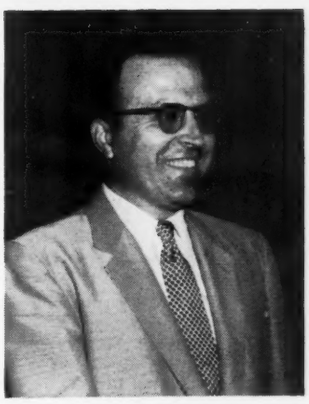
Typortional Typography

Typortional typography (distorted or modified typography) by photographic means, was the subject discussed by Joe K. Costello, jr., Art and Type Director, Progressive Composition Co., Philadelphia. During the course of Costello's address, it became apparent that there is an insatiable desire upon the part of Art Directors, Typographers and others having to do with typography for modification of existing type faces in many ways—that is, there is always a demand for some different effect than has been achieved previously and which will vary from the type designer's original pattern. Costello discussed the work which is done on his company's Fotomaster camera. He broke the effects to be achieved in type design modification into 10 different classifications. These are: proportion adjustments, weighting, slanting, perspective, product perspective, outlining, cast shadow, pulled shadow, base relief and overprinting.

He discussed briefly the Fotomaster camera by way of saying that it is identical with the photoengraver's camera with the combining of the mechanics that are to be found in a studio camera. The major difference in the Fotomaster camera and the camera used by the photoengraver consists of distortion prisms which are positioned in front of the copyboard and in front of the film holding board. These prisms create the italics, the back slants, and assist in the various non-proportion reductions and blow-ups. He explained further that the copyboard and the negative back swing parallel directions or opposite directions creating the perspective desired. By moving the lens board one is able to look at the copy from various angles either in perspective or in flat form. The back of the camera is built into a darkroom. The operator is in total darkness or red lights may be utilized so that he is able to visualize what is occurring in the distortion process.

The Hadego Machine

Alfred Bellotti, Supt., McLean Bros., Ltd., Montreal, Canada, discussed the Hadego machine and said it could be well compared to the hot metal Ludlow but it is not suitable for large blocks of copy or bookwork. In the McLean plant it is used primarily for headings for artwork, heads for department store adver-



Robert E. Rossell

The Research and Engineering Council of the Graphic Arts Industry has named a new managing Director. He is Robert E. Rossell, who comes to this important post after spending 12½ years with the U. S. Army Engineers' Research and Development Laboratories at Fort Belvoir, Va. He served the last eight years of this period as Chief of its Map Reproduction Branch. Rossell's career has also included an association with the Lanston Monotype Machine Co. as a technical engineer. He attended the University of Cincinnati and has had experience in camera and offset platemaking. His stay at Fort Belvoir provided familiarization with recent developments in Graphic Arts materials and techniques. The Council's new Director is, at the present time, Second Vice Pres. of the Technical Assoc. of the Graphic Arts Industry, of which he is a charter member. He served for five years as a Research Committee member of the Lithographic Technical Foundation, and is also a charter member and past president of the Washington (D.C.) Litho Club.

tising, captions, credits and for movie and television films. Included in the work produced on the Hadego are certain types of labels and a number of other uses. It is especially useful in replacing reproduction proofs of foundry type. High contrast proofs normal or reverse, also film in either negative or positive form are furnished. The two Hadego machines in operation in the McLean plant are operated on a two shift basis.

In the Hadego equipment, the "matrices" are plastic blocks with the type character in white relief on a black background. The fonts are available in 20 pt. and 48 pt. sizes. The 20 pt. size is used for composition from 4 to 48 pt. and the 48 pt. matrices are used for 10 pt. to 115 pt. composition.

Bellotti stated that since the composition is visible to the operator as the lines are set, the margin of error is smaller which in turn obviates costly patching in film and resetting. He further pointed out that the range of point sizes and fractions of point sizes are unlimited. No problem is presented when it is necessary to squeeze an extra character or so into a display line that often means dropping from 48 pt. to 36 pt. or 36 pt. to 30 pt.

The product of the Hadego is on film. To print proofs from the Hadego, McLean uses a Bruning proofing machine which prints reproductions that are bone dry in 30 sec. The film rack on the machine is 11 in. by 14 in. He spoke in particular of the flexibility of equipment which permits leading of lines, and the number of points desired which permits a job to be set all in one piece on film.

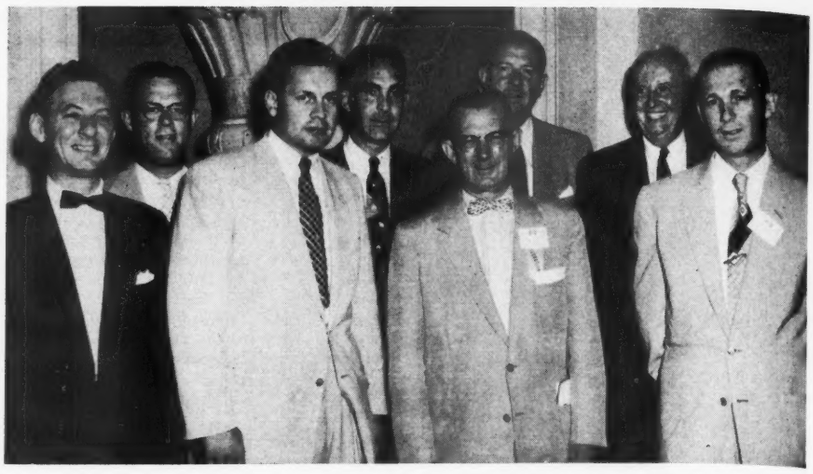
Letterpress Pressroom Operation

IF THE letterpress printer took the care in preparing the job before going to press that printers of other processes take, there would be little difference in the comparative costs of producing a job. This statement by G. W. Bassett, Sales Research Mgr., Miehle Printing Press & Mfg. Co., opened the panel discussion at the Letterpress Presswork Clinic held during the Intl. Craftsmen Convention in Philadelphia.

Members of the panel group served as sources of information in their respective fields on problems concerning the commercial letterpress pressroom. General theme of the meeting was *The Correct Tool for the Job*. Areas of discussion centered on printing plates, rollers, ink, paper, presses and people. Intl. Treasurer Albert L. Kolb, Manager, Printing Dept., Marine Trust Co., Buffalo, N. Y., presided.

Makeready Begins in Artist's Mind

Bassett, who played the role as moderator of the clinic, asked how many letterpress printers take the care and precision in preparing their forms, rollers, inks, papers, etc., that the offset and gravure printers do before going to press. The ideal situation, he added, is when makeready begins with the art work, or even better still, in the artist's mind. He remarked further that too much of the pre-planning is left to the last moment and takes place only as it becomes an issue.



Participants in the Letterpress Presswork Clinic at the Philadelphia Craftsmen's Convention are shown from left to right. Front row: Harry Ziegler, S. D. Warren Co., Philadelphia; Chairman, G. W. Bassett, Sales Research Mgr., Miehle Printing Press & Mfg. Co.; Intl. Treasurer Albert L. Kolb, Manager, Printing Dept., Marine Trust Co., Buffalo, N. Y.; and Estel Reed, Division Corporation, St. Joseph, Mich. Rear row: Edward Wade, Bensing Bros. & Deeney, Inc., Philadelphia; Richard Gardner, Jahn & Ollier Engraving Co., Chicago; Norman Rowe, Ideal Roller & Mfg. Co., New York, N. Y.; and Arthur Brooks, Technical-Education Director, Graphic Arts Assoc. of Illinois.

Hits Critics of Engravers

A rebuttal against critics of the photoengraving industry was made by Richard W. Gardner, Jahn and Ollier Engraving Co., Chicago. He labeled as false the charge that the engraving industry is the sole source responsible for the loss of letterpress business to other processes. Gardner dealt with the broad problems which must be solved ". . . if the letterpress industry is to retain or regain, depending on one's individual viewpoint, its supremacy in the field of Graphic Arts reproduction." Mr. Gardner's interesting talk appears as a separate article in this issue of *Printing Equipment Engineer*.

Representing the paper industry on the panel was Harry J. Ziegler, S. D. Warren Co., Philadelphia. He said the paper industry is still highly dependent upon skilled craftsmen. Their skills, he added, are invaluable in helping compensate for the variable encountered in daily pressroom operations.

Ziegler named research within the paper industry and on the part of suppliers, and exchange of technical information within the Graphic Arts as important contributions toward better printing in the past quarter century. He labeled the industry's ability to increase the pigment content both within and on the surfaces of book papers as the outstanding single contribution.

Ink Is Most Versatile Tool

Ink problems and their solution by both pressmen and inkmakers was the topic assigned to the next speaker, Edward Wade, Bensing Bros. & Deeney, Inc., Philadelphia. He said printing ink was the most versatile tool in the printing plant since it can be altered in the pressroom to control any number of situations.

Wade told how most inks are formulated for specific presses, necessitating considerable information conveyed by the printer to the inkmaker for such purpose. As part of this, he said pressroom personnel and their working methods must be understood. He related that this factor varies among printing plants and the lack of such knowledge is often the reason why complaints about an ink are received from one plant while another plant doing the same type of work will print trouble free.

Continuing, he added: "Intelligent adjustment of ink by pressmen must not be confused with fellows who haphazardly add compounds and varnishes to an ink. Your inkmaker would always like to supply you properly formulated ink ready to use right from the can and we do to many printers, but we must also take into consideration the personalities of those using the ink and formulate the ink accordingly."

Foremen's "New Look" Criticized

A lusty swing was taken at the advocates of "the new look for foremen" by Arthur Brooks, Technical and Education Director, Graphic Arts Assoc. of Illinois. Brooks asserted that the superior mechanical and technical knowledge for which foremen were chosen in the past should still be the primary reason for their selection to these jobs today. Understanding of human relations, he said, must be secondary.

The speaker disagreed with the theorists who claim that in the past foremen were totally devoid of any knowledge of human relations. He accused such people of " . . . selling the old time foreman short and . . . never bothering to make the acquaintance of many still on the job. All of them belong to the human race and very few come equipped with a tail, two heads or extra thumbs."

Brooks suggested that the pendulum of foreman requirements has swung much too far in the direction of the "new look" and predicted that if the present trend continued " . . . each supervising human relations specialist will need an old fashioned foreman-assistant to do the real work of management—getting the work done."

Notes Reversal of Trend

He offered evidence of a reversal of this trend by quoting from a recent service letter sent to members of an employ-

ers' association. The letter read in part: "Don't let the supervisor think the measure of his success depends on his popularity with the help. He has a right to stand on performance alone. Morally, the good boss stands on his own judgment, but falls if he has to subordinate authority in need to be popular."

Brooks' fighting talk also went into education in the schools and training in the plants. He said recruitment en masse was being substituted for proper training of students in Graphic Arts courses. He charged that a lack of basic knowledge after several years of printing courses exists among students.

Brooks said more aids are at hand today than ever before for the training of human tools. Accurate aptitude testing for specific skills was heralded as one such aid. He suggested that employers use the tests available without charge through local-state employment offices.

Howl Like Wounded Citizen

In offering suggestions on improvement of printing education, he called for members of the Graphic Arts to take an interest in what goes on locally in printing education. He added: "Offer your services to printing teachers and arrange employment for students before they graduate." He also advocated arrangement of plant visitation for those interested. He concluded: "Get on your hind legs and howl like a wounded citizen if the printing courses in Hometown are being used as a dumping ground for poor mixedup kids and the boys who have to do something with their hands."

Pre-Press System in Use

The Vandercook Pre-Press System in use at the Davidson Company, St. Joseph, Mich., was described for the benefit of the Craftsmen audience by E. Reed, a representative of that firm. Reed claimed installation of the system has enabled his company to cut positioning time about 50% and reduce overall makeready time by more than 15% on two-color and single color publication printing and over 25% on multicolor advertising and horticultural printing.

He related that before the system was installed three years ago a complete analysis of the plant was made. He said most printer's problems originate in the composing room and lockup department. Reed attributed makeready and press delays to wood mounted plates, bad type, weak chases, etc.

About weak chases, the speaker had this to say: "We improved our lockup by doing away with light skeleton chases and adopting heavy chases. Our chases are now made of ¾ in. stock instead of ⅝ in., and they are 2 in. wide with a ½ in. tie bar across the short dimension." He claimed this type of chase will not bow under lockup pressure or distort during handling.

Reed's remarks dealt with how each part of the Vandercook system functions. A description of these pre-press methods appeared in the October 1951, December 1952 and January 1953 issues of *Printing Equipment Engineer.*

Last One In Gets Blame

Craftsmen in the audience were then invited by Chairman Bassett to ask the panel any questions that were on their minds. One executive said he wondered if the average printer avails himself of any of the free information and research details which are available to them. Bassett said he thought not very many did. Rowe remarked that the printer fails to call for assistance in production until something goes wrong. Then he calls in the inkmaker, paper man and press manufacturer in a frantic rush to correct the trouble. He said that many times the first one on the scene incorrectly blames the others for the printer's trouble.

Another person asked Mr. Brooks why the printing industry can't absorb high school graduates of printing courses. He replied that it wasn't a problem of shortage of apprentices that exists in the industry but rather a shortage of journeymen. He suggested more training programs be established by employers and that the industry also adopt a retirement systsem.

Tell Teachers, Not Others

Harold Sanger of the Chicago Board of Education, said printing education leaders welcome criticism but asked it come "over the work frame" and not through other sources. Come into the schools, he said, either individually or collectively and suggest proper training methods.

A New Haven, Conn., printing teacher remarked that the industry in that city has a problem of getting boys to go into the printing industry and trying to get the right type of boys to take up printing as a career. He reported the demand for trained boys was adequate

Printing educational policies and plans were discussed at a meeting held during the Craftsmen's Convention in Philadelphia. Among those attending were, seated, left to right: Howard Massman, Printing Trades Coordinator, Dayton (O.) Public Schools; Sam Burt, Exec. Director, National Graphic Arts Education Assoc., Washington, D. C.; Kenneth Burchard, Asst. Dean, School of Printing Management, Carnegie Institute of Technology, Pittsburgh, Pa.; and Lee Augustine, Vice Pres., Printing Machinery Co., Cincinnati, O.) Standing, left to right: Harold Crankshaw, Instructor, Public School System, Washington, D. C.; Arthur Brooks, Asst. Exec. Secy., Graphic Arts Assoc. of Illinois, Inc.; Dave Eisenberg, Editor, *Graphic Arts Monthly;* Randolph Karch, Advanced Training Industrial Education, Dept. of Public Instruction, State of Pennsylvania, Kline Village, Harrisburg, Pa.; Wayne Harsha, Editor, *Inland Printer;* and John T. Porter, Manager, Educational Services Dept., American Type Founders, Inc. Also attending the meeting but taking the photograph were MacD. Sinclair and Edward H. Owen of *Printing Equipment Engineer.*

International Craftsmen Appointments

The following appointments to the official family of the Intl. Assoc. of Printing House Craftsmen were announced in Philadelphia by Intl. President Thomas P. Mahoney:

APPOINTED OFFICERS:

Membership Commission, George Wise, Supt., Dugan-Millis, Inc., Cleveland.

Publications Commission, Howard N. Keefe, Sales Rep., Cincinnati Lithographing Co., Cincinnati, O.

Public Relations Commission, Charles V. Morris, Henry Lindenmeyr & Sons, New York, N. Y.

Technical Commission, Kenneth R. Burchard, Asst. Dean, School of Printing Management, Carnegie Institute of Technology, Pittsburgh, Pa.

Representative-at-Large, Ferd Voiland, jr., Kansas State Printer, Topeka, Kan.

Executive Secretary, Pearl E. Oldt, Cincinnati, O.

SPECIAL COMMITTEE CHAIRMEN:

Advisory Council, Gradie Oakes, President, Process Color Plate Co., Chicago.
Club Bulletin Service, Tom Tierney, Publisher, *New England Printer & Lithographer,* Boston.

Club Programs, James Ross, Montreal, Can.
Constitution and By-Laws, Alfred T. Peters, Vice Pres., Thos. C. Peters Co., Utica, N. Y.
Graphic Arts Education, Byron G. Culver, Head, Dept. of Printing, Rochester Institute of Technology, Rochester, N. Y.

Historian, Milton Horn, Fort Worth, Tex.

Participating Memberships, Harry B. Friedenberg, General Supt., Tri-Craft Press, Detroit.

***Printing Week,* Floyd C. Larson, Director, U. S. Navy Printing Office, Great Lakes, Ill.**

Safety, Peter J. Bernard, Director of Personnel and Safety, H. Wolff Book Mfg. Co., New York, N. Y.

Supervisory Training, William F. Gutwein, President, Wm. F. Gutwein, Inc., Louisville, Ky.

The convention session devoted to a discussion of silk screen printing featured a major talk by Jack Simmons (right), President, The Chromart Company, Philadelphia. Chairman of the meeting was Intl. Past Pres. Gordon J. Holmquist (left) Partner, Cole - Holmquist Press, Los Angeles, Calif. Also present was Robert H. Blundred (center), Exec. Secy., Screen Process Printing Assoc., Chicago.

in that city. Brooks said he thought there was no problem where demand exceeds supply. The New Haven teacher suggested proper training of students for the Graphic Arts was an industry problem.

All Printers Told: "Stick to Own Last" at Silk Screen Clinic

SCREEN process printers, said Jack Simmons, shouldn't take on printing jobs which are primarily designed for the letterpress and offset processes. By the same token, he advised that letterpress and offset printers should stay away from jobs which the screen process printer can produce more effectively. He suggested cooperation among users of the three processes rather than in any one of the processes, trying to do the job which doesn't fit production.

Simmons, who was the featured speaker at the Screen Process Clinic during the Intl. Craftsmen's Convention in Philadelphia, is President of The Chromart Company, Philadelphia. The meeting was presided over by Gordon J. Holmquist, Intl. Past President and President, Cole-Holmquist Press, Los Angeles. Present on the speaker's platform, also, was Robert H. Blundred, Exec. Secy., Screen Process Printing Assoc. Intl.

Process is Still Unlimited

Simmons' talk dealt with the great variety of uses of screen process printing in industry and said this method of printing has made the claim it can print "on anything standing still long enough." He said the members of this branch of the industry as yet don't know how far they can go with screen process printing.

Among the peculiar uses of the process is a method by which printing can be done with water and pigment. Here, powder is used rather than ink which is brushed through the screen bearing the image. As it drops on the water it becomes mud which floats on the top. A commercial use for this unusual method has been found in the ceramics industry where the product can't be touched while it is still wet.

This, We've Got to See!

Interjecting a note of humor, Simmons said the project this year is to find a way to print on steam. He related that one screen process printer is working on a method by which he will be able to silk screen a number of colors in one impression. He also told of one printer who was able to silk screen on ice cream which was edible afterwards. "It's a case of having your process and eating it, too," he quipped.

Another unusual use of the process was on a pie-cut designed ceiling in a New York, N. Y., theatre. The problem of an artist working on his back painting designs in each of the pie-cut sections was quickly overcome through the ingenuity of a silk screen printer. He produced a 32 color screen job and pasted it on each of the ceiling's pie-cut sections.

Short Runs Are Its Meat

Simmons called the screen process the fourth major member of the Graphic Arts industry. He emphasized the process is well adapted to short run work which average approx. 500 impressions per job. Concerning speed, he said 250 to 500 and 600 i.p.h on screens worked by hand can be produced. He acknowledged that the speed is dependent on the operator and type of work. Faster speeds, he commented, are not necessary because of the small runs involved.

Industry Mechanization

Touching upon mechanization of the screen process industry, the speaker acknowledged that drying of the freshly printed sheets is stil perhaps the biggest problem. He described a variety of automatic methods of drying which have been tried. He said this problem is slowly being licked, however, through the use of infrared heat, air drying, improved inks, etc. Silk screen presses now available to the industry were also described.

Simmons exhibited samples of books with 10 and 11 colors silk screened on the covers after the book had been completely printed and bound. He pointed out that the process is especially designed for performing work containing a multiplicity of colors because of the low cost of making plates (or screens, as they are known in the screen process industry).

Colors Withstand Severe Conditions

He claimed that silk screened colors will stand up under many types of severe conditions. He named the washing of bottles and trucks on which there is silk screen printing as examples. Metallic colors in screen process printing, he added, are particularly bright. He pointed out that ink can be laid thick enough so that the colors will come out strong.

Size Limitations

Simmons was asked what the size limitations were in silk screen printing. He said the Chromart firm had printed sheets up to 12 ft. wide by 36 in. high. He mentioned that he had seen a 32 ft. wide by 40 in. high banner which had been silk screened. Width limitations for silk screen printing are about 54 in.

One Craftsman inquired from the speaker if flock can be used along with screen process printing. Assuring him that this can be done, Simmons added that in some cases the glue is screened on the sheet for the flocking operation.

According to the Chromart official, silk screen printers have a low spoilage figure due to the short runs on jobs. When pressed for a more definite answer to the query on spoilage, he said that if the run calls for 200 impressions, the printer will start with about 250 sheets and usually winds up with about 225 good sheets.

RCA Color Corrector Progress

A SPECIAL technical meeting was held Tuesday, August 10, at the Philadelphia Craftsmen's convention. The entire meeting was devoted to the RCA Color Corrector. G. Stuart Braznell, President, Braznell Co., St. Louis, served as chairman of the meeting. Braznell introduced Fred Lewis, Marketing Specialist, Radio Corporation of America. Lewis discussed *The New RCA Color Corrector*. The latter part of Lewis' address, in reality, consisted of a progress report about the RCA Color Corrector. The speaker reviewed at some length the genesis of color printing with discussion regarding color development through the years. In particular he mentioned Jacques Christophe Le Blon, born in Frankfort, Germany, in 1670 as the fath-

The new RCA Color Scanner was described to Craftsmen in Philadelphia by Fred Lewis (left), Marketing Specialist, Radio Corp. of America, Camden, N. J. Shown with Mr. Lewis is the Chairman of the meeting, G. Stuart Braznell, General Mgr., Braznell Company, St. Louis, Mo.

Members of the 1955 Intl. Printing Week Committee mapped plans in Philadelphia for the approaching observance. From left to right are: Peter D. Nielsen, Emeryville, Calif.; Clinton C. Barnes, Fort Wayne, Ind.; Philip Hallgren, Hartford, Conn.; Chairman Floyd C. Larson, Great Lakes, Ill.; Earl S. Ellis, Milwaukee, Wis.; Ferd Voiland, jr., Topeka, Kan.; Robert Fowler, Easton, Pa.; and Milton C. Voertman, St. Louis, Mo.

er of color printing through his development of the mezzotint plate.

The speaker said color printing would undoubtedly have been limited to occasional reproductions of important works of art but for the discovery of photography and its utilization as an aid in the making of printing plates. Mr. Lewis continued: "One of the first steps in this direction was taken in 1855 by the British physicist, James Clerk-Maxwell, who proposed a method of obtaining color separations through filters."

"The various techniques that are employed in color reproduction have been devised largely on the basis of empirical observations," related the speaker, who discussed at some length the use of masking procedures and color correction.

The speaker stated: "Automatic color correction of the type RCA is developing (unscreened color corrected negatives and positives) relieves the craftsman of the necessity for long hours of manual labor, leaving the artistry and craftsmanship to the skilled, professional color man."

Mr. Lewis stated: "In 1944 a decision was made by RCA to consider the design and construction of a commercially practical color corrector machine. At this point, the project left the field of applied research and became a commercial development program. The first commercially acceptable plates came off the new machine in August, 1949.

Operation of Experimental Machine

"This scanning machine is a large mechanical device constructed almost entirely of aluminum. At the time the main section was built, it was the largest aluminum casting ever made. Quite simple, it was a modified ruling engine, hydraulically driven and controlled. This scanning unit was interconnected to an electronic computer which was mounted on two standard radio relay racks.

"Systemwise, the unit is operated with three standard R.G.B. camera separations mounted in register with each other and a photographic plate is also mounted on the scanning frame. The large bed on which they are placed oscillates back and forth and inches forward over three fixed light and photocell systems. The varying densities of the separations are converted into electrical signals by the photocells, and are sent to the computer. The computer modifies the three signals and makes available the electric signals required for the printing plates—cyan, magenta, yellow and black. The mechanical scanner requires that the input separations be positives and gives continuous tone negatives as an output.

Why IC-RCA Device Was Not Salable

"Remembering that this is an experimental device, it has been gratifying to us that the results for the most part have been commercially acceptable. The output from this experimental mechanical scanner has been used in large publications and in other commercial color reproductions. Why didn't Interchemical Corp. or RCA manufacture and offer copies of this device for sale? The two basic reasons why this wasn't undertaken hinge on the size and mechanical complexities of the device itself. Designwise, the device is such that it does not lend itself to economic manufacture, maintenance and service. Further, if it were capable of reasonable manufacture and service, its cost would be such that its economic value would be lost in the 6 to 8 hours required to scan a set of separations the mechanical way.

RCA Corrector Is Designed Around Flying Spot Technique

"When RCA assumed the project, its objective was to design a scanning Color Corrector more adaptable to manufacture and maintenance and having a usable output of economic significance. The accomplishment of this objective has ben a long and expensive task.

"The RCA device is designed around the television Flying Spot technique. Instead of moving a large mechanical mass in order to scan separations, the unit contains a kinescope which is so designed as to manipulate a beam of electrons which generates a flying spot of light. This spot is approx. 0.00015 in. diam. The recording of a corrected plate is accomplished by a similar kinescope except that the electron beam is now modulated in intensity to expose the photographic plate. The recording unit is enclosed in a small camera capable of direct size variations up to 11 in. by 14 in. It is interesting to note that technically the resolution of the kinescope or picture tubes being used is 6 to 8 times greater than regular TV kinescopes. Developmentwise this unit is an accomplished fact. Presently we are crossing the gap between the development and the manufacturing functions.

"After the machine is set up, key areas in the copy can be checked and minor changes in the setup can be made to include special effects. The scanning-recording operation takes a little less than an hour for the four plates. In some cases the computer setup may take another hour for complex subject material.

The Outfit is Either Positive or Negative

"The production unit will be so designed to accept either continuous tone positives or negatives as input medium and will deliver either positives or negatives as an output.

"The four saparations turned out by the device are processed into halftones and into metal plates by standard methods. The only special requirement that is placed by this device, is that the method of processing must be repeatable day after day. Not only must the same methods be repeated but they must be controlled. After the flat etch, these plates will be ready for the final hand finishing or artistic interpretation which no machine can anticipate.

Color Correction Only—

"Let me emphasize that the RCA unit does color correction only. Therefore, standard R.G.B. camera separations are necessary as input material. The unit corrects the separations for the errors of the camera process, the deficiencies of the inks and paper and for the errors

Men You Have Made

(Abstracted from an address delivered by John S. Williams, President, Williams & Marcus Co., Philadelphia, before the 35th Annual Convention of the Intl. Assoc. of Printing House Craftsmen, Philadelphia, August 1954)

A LEADER is one, according to Webster, who precedes, who guides or shows the way, who precedes or directs and is followed by others in conduct, opinion and undertaking. It is by your example and by your example only that your own organization is going to grow and expand. Your product will reflect what you put into it and, when the time comes for retirement, and you sit looking into a log fire, smoking your pipe and reflecting back on your life and of all your accomplishments, you'll be proudest of the men you have made.

and losses of the final processing steps. In addition, it composes a black printer. The RCA unit does not separate copy of itself. The separations are made on a camera. Therefore, the unit will correct any copy that now can be handled in a regular plate shop (within the 11 in. by 14 in. size limitation).

Color Correction Factors

"I have mentioned that the unit is designed to correct the errors for the final processing. Let me explain further. Early in this development it became obvious that color correction involves not only the interbalance of the color plates but also includes the tonal distortions within each plate. To encompass this factor, electronic circuits have been developed which compensate for tonal losses in the processing steps. If a graphic plot of the tone values in the copy and in the first proof of the reproduction is made, it results in a curved line. The electronic circuit, which we have chosen to call a tone corrector or hi-light and shadow boost, adjusts this curve and gives a final reproduction which has the desired linearity. To utilize this automatic tone correction a plate shop using an RCA type device must duplicate its process steps day after day. To do this, control is necessary. The exact nature of the process is unimportant; the control essential, repeatability is required. Just what is it that must be controlled? In each process there will be a difference but the basic items to be controlled are usually the same. Stop and screen distance in the halftone process, the temperature, time and Baumé of the etch, the type of hardtop are all controlled items. In the photographic steps the emulsion numbers, temperature, time and concentration of the solutions must be controlled.

"It is anticipated that a period of extensive field testing will be successfully concluded within the next 15 months. When the Color Corrector is offered to the printing trade the responsibility for continuous operation, service and operator training will be assumed by RCA."

Win a "BENNY"

enter the

P. I. A.

Printer's and Lithographer's Self-Advertising Contest

Obtain Rules and Entry Blanks

PRINTING INDUSTRY OF AMERICA, Inc.
719 Fifteenth St., N.W. Washington 5, D.C.

Shown above are the participants in the Flexographic Printing Clinic held at the Craftsmen's Convention in Philadelphia. From left to right are: Robert Zuckerman, Kidder Press Co., Inc., Dover, N. H.; F. Henry Wittel, Director, Production, Research and Development, Package Products Co., Inc., Charlotte, N. C.; Chairman Gradie Oakes, President, Process Color Plate Co., Chicago; Waldo Bass, Vice Pres., West Essex Printing Co., Inc., Caldwell, N. J.; and Douglas E. Tuttle, Interchemical Corporation, Printing Ink Div., New York, N. Y.

"University Education Not Needed"

It was stated by Mr. Lewis that trade shops will be the first to use the RCA Color Corrector. It will be available later to others.

In response to another question, Lewis said a good commercial color man will be needed to operate the Corrector. However, operation of the device is simple. The operator need not possess a university education but he can be a regular color worker.

Lewis was asked from the floor what he meant by a commercially acceptable color reproduction, that is, if the instrument would turn out a "pretty picture." The inference was that the reproduction would not be faithful to the original copy. Lewis replied by stating the reproductions would be of true match in color. It will be a useful and quicker tool for producing negatives and positives to be screened by the platemaker.

Flexography— What it is and How 'tis Done

THE Flexographic Printing Clinic held during the Intl. Craftsmen's Convention at Hotel Bellevue Stratford, Philadelphia, on Wednesday, Aug. 11, seemed to be a very satisfying one for those in attendance. Gradie Oakes, President, Process Color Plate Co., Chicago, and Chairman of the Advisory Council, introduced F. Henry Wittel, Director of Production, Research and Development, Package Products Co., Inc., Charlotte, N. C.

In his introductory remarks Wittel discussed the early stages of Flexography which until a short time ago was known as Aniline printing. He told about the refinements which came to the process commencing in 1946. These refinements consisted of improved platemaking methods and improved press equipment.

He enumerated the different kinds of stock upon which designs can be printed by the flexographic process. These include paper and board, glassine, Cellophane, Polyethylene, acetate, cigarette paper and Vinyl material which is now being introduced into the textile industry.

Flexographic Printing Plates

By WALDO E. BASS*

**Vice Pres., West Essex Printing Plates, Inc., Caldwell, N. J. Abstract of address delivered before Intl. Craftsmen's Convention, Hotel Bellevue-Stratford, Philadelphia, August 1954*

FLEXOGRAPHIC plates are letterpress plates. They print from a raised surface. They are made from rubber. The basic reason for using rubber plates is that we print with liquid inks. Rubber has a much greater affinity for the liquid inks (or technically has a lower surface tension) so that we can obtain uniform coverage of solids and type.

Flexographic plates are duplicate plates and are made to duplicate type, zinc or copper engravings, or electros. They must be printed with a kiss impression; therefore, the first requirement is accuracy. Good Flexographic plates require maximum tolerances of plus or minus 0.001 in.

Closest to Stereo Process

The basic process of making Flexographic plates probably is closest to the stereotype process. A phenolic impregnated board is used. This is molded under heat and pressure to produce a female mat or matrix. From Bakelite (or phenolic mold) unvulcanized rubber, which may be either synthetic or natural, is molded and cured again under heat and pressure to reproduce the original form. Hydraulic presses or vulcanizers with platens exerting a minimum pressure of 1000 lbs. per sq. in. of working area, heated to approx. 300 deg. F.,

R&E Council Has New Managing Director—At the meeting of the Executive Committee of the Research and Engineering Council held recently in Washington, D. C., Robert E. Rossell was introduced as the Council's new Managing Director. Rossell came to the Council after 12½ years with the U. S. Army Engineers where he was chief of the Map Reproduction Branch at its Research and Development Laboratories, Fort Belvoir, Va. At the Washington meeting, the Council mapped plans to complete work on a number of projects which the Council has had underway and selected Boston as the site for its Fifth Annual Meeting to be held on May 11, 12, 13, 1955, at the Parker House.

The Council's membership now include 64 associations and 223 individual member companies, represented in the Council by over 600 Graphic Arts executives. One of the Council's most recent projects is printability which is under the direction of Dr. Marvin C. Rogers of R. R. Donnelley & Sons Co., Chicago. The Council also appointed a representative to work with Craftsmen's Association and several other national organizations, in a program to implement some of the findings of the Council.

Identified from left to right at the meetings are the following: (seated) Council Vice Pres., Felton Colwell, President, Colwell Press, Inc., Minneapolis, Minn.; Council President, John H. Davis, Jr., Vice Pres. and Secretary, Judd & Detweiler, Inc., Washington, D. C.; Council Treasurer, Joseph Schwartz, President, Wescott & Thompson, Inc., Philadelphia; Council Vice Pres., S. F. Chernoble, President, Comet Press, Inc., New York, N. Y.; Frank F. Pfeiffer, Vice Pres. and General Mgr., Reynolds & Reynolds, Dayton, O.; Victor Strauss, Presentation Press, New York, N. Y.; William C. Walker, Assoc. Dir., National Printing Ink Research Institute, Bethlehem, Pa.; Dwight L. Monaco, Asst. Vice Pres. and Dir. of Mfg., McGraw-Hill Publishing Co., Inc., New York, N. Y.; C. A. Mawicke, President, Pontiac Engraving & Electrotype Co., Chicago; Edward J. Triebe, Exec. Vice Pres. and Treasurer, Kingsport Press, Inc., Kingsport, Tenn.

Standing: Robert E. Rossell, Managing Dir., Research & Engineering Council; P. J. Bernard, Dir. of Personnel and Safety, H. Wolff Book Mfg. Co., Inc., New York, N. Y.; E. O. Vandercook, President, Vandercook & Sons, Inc., Chicago; G. L. Erikson, Vice Pres., Braden-Sutphin Ink Co., Cleveland; Council Secretary, J. Homer Winkler, Technical Advisor, Battelle Memorial Institute, Columbus, O.; C. L. Jewett, Technical Dir., Printing Products Div., Minnesota Mining & Mfg. Co., St. Paul, Minn.; C. Howard Thomas, Vice Pres., National Publishing Co., Philadelphia; W. E. Griswold, Exec. Dir., Lithographic Technical Foundation, Inc., New York, N. Y.; Morris Kantrowitz, Technical Dir., U. S. Government Printing Office, Washington, D. C.; George H. Cornelius, jr., Gen. Mgr., Cornelius Printing Co., Indianapolis, Ind.; Alan S. Holliday, President, Craftsmen, Inc., Kutztown, Pa.

with an overall accuracy of plus or minus 0.001 in. are required. Most flexographic plates are molded to 0.105 in. thickness. However, certain operations require thicker plates such as 0.155 in. or 0.175 in.

Practically all Flexographic plates are mounted on the press plate cylinder with double faced adhesive or sticky back. In the case of the 0.105 in. plate the sticky back will be 0.020 in. thick for a total plate thickness of 0.125 in. which has been adopted as standard by the industry.

The Shrinkage Factor

Photoengravings must be made to compensate for the stretch and shrinkage of rubber plates. In molding a rubber plate, we find that, due to the inherent characteristics of rubber, the plate will have a shrinkage of roughly 3/16 in. per ft. Thus, if we start with an engraving for a 12 in. sq. label, we find that across the cylinder we will be printing approx. 3/16 in. less than 12 in. However, the dimensions of the outer surface of the plate is mounted around the cylinder will stretch. Normally this stretch will overcompensate for the shrinkage so that it will print longer than 12 in. Therefore, it is necessary in making the engraving to compensate for the shrinkage across and stretch around the cylinder. Shrinkage across the cylinder remains fairly uniform. Stretch around the cylinder varies with the cylinder diameter. For this reason it is generally necessary to start the Flexographic job with basic planning in the art stage.

We must also take into consideration the limiting factors of the Flexographic process. We are printing with liquid ink and must compensate accordingly. With standard letterpress where the ink being a paste lays on top of the letter or type, we print basically the same thickness or width as the character. With the Flexographic process we have a very slight squeeze out so that we tend to print wider than the character.

Plate Requirements

A special engraving technique is required for Flexographic printing. Similarly, dropouts must be cleanly and deeply etched. Etching should be correct to a minimum of 0.025 in. as against 0.014 in. to 0.018 in. commonly accepted in commercial engravings. Of course, in this no shoulder etching care must be used to prevent undercutting or backetching which makes it impossible to mold.

Routing is more critical with Flexographic plates and the pattern plates would be relieved by routing or extra deep etching of 0.040 in. to 0.045 in. in the dead areas.

When the plate is on the press fine screens generally fill in. For this reason best practice recommends screens not finer than 65 line. However, 85 and 100 line screens are being used with extra careful presswork.

Makeready

There being no packing on the press impression cylinder, there is no provision for makeready by overlays. Any makeready must be beneath the plate. However, keep in mind the plates are sticky back mounted and any underlay is messy and time consuming. The platemaker has found it important to pre-makeready plates by cutting back or lowering fine type, thin lines or halftones. Thus he can deliver a plate with the fine detail cut back from 0.0015 in. to 0.003 in. lower than the solid areas.

Plate Life on Press

In studying the Flexographic process, plate life must be considered. Like any printing process plate life is affected by mechanical abrasion and chemical action. With well designed and accurate presses and accurate plates where all elements including form or transfer rollers and paper or film feed, are in step we are printing with a minimum of impression and, therefore, abrasion, or wear, is at a

minimum. Similarly, if the correct type of rubber is used with the ink on the job, chemical action is not a factor. As a consequence, a million impressions per plate is not at all unusual to expect.

From a storage standpoint, properly stored plates do not deteriorate and are good for several years.

Flexographic Press Design Explained

By ROBERT ZUCKERMAN*

**Kidder Press Co. Abstract of address delivered before Intl. Craftsmen's Convention, Hotel Bellevue-Stratford, Philadelphia, August 1954.*

BASICALLY, flexographic printing is a letterpress operation—fluid ink being applied by a form roller to rubber plates which transfer the image against a steel or a rubber covered impression cylinder.

Almost all flexographic printing today is done by rotary web printing.

The printing section of a flexographic press is extremely simple. It consists of four rollers. There are two ink rollers, one of which revolves in the ink and furnishes it to the second roller which deposits the ink onto the printing plates. Pressure between these two rollers distributes the ink. The third roller is the one on which the rubber printing plates have been mounted. The last roller in the series is the impression cylinder, There are variations, such as single roll fountains with doctor blades—which we will not discuss for the sake of simplicity.

The ink rollers and impression cylinders are of a fixed size, but the plate cylinder can be of any size within the range of the press, which usually is 2 or 3 to 1. That is, a press having a minimum printing repeat of 10 in. will usually take a maximum of 30 in.

Can Vary Repeat

Herein lies one of the basic differences between flexographic and other types of web fed or sheet fed letterpress equipment—the ability to vary the printing repeat as needed, usually in steps of ¼ in. more or less.

Provisions for moving the ink rollers to the plate cylinder and the plate cylinder to the impression cylinder, and means of exerting pressure between the ink rollers constitute the printing adjustments. For multicolor printing, means are provided for sidewise and lengthwise registration.

As Many as Six Colors

Several printing units of this type may be combined in a single frame. Presses with as many as six colors are being built regularly as standard equipment. The usual arrangement is to place the units over one another and opposite to one another, so that a four color press will have two sections over two sections with the web traveling down on one side of the press for the first two colors and up on the other side for the other two colors. This setup is known as a stack type press. A modification of this design permits all of the colors printing against a common impression cylinder.

Another type of press known as the unit type is built with each color housed in a separate frame—three colors are then placed in a line for multicolor printing.

Presses of either type may be built in any width. At the present time, I believe the maximum is in excess of 100 in.

The material to be printed, which varies from 4 lb. or 5 lb. tissue to the ream, to 30 pt. and 40 pt. board, and includes such stocks as Cellophane, Polyethylene, Vinyl, and similar plastics, is supplied in rolls varying from 9 in. to 70 in. diam.

Fabricating Printed Output

After printing, the web of material may be rewound, fed directly into a bag making machine, cut into sheets, or die cut into boxes, milk cartons or some other products.

Where the printed material is being rewound, various methods are employed according to the construction of the equipment and the nature of the product. The simplest type of rewinder consists of a slipping belt type of drive, with such variations as flying splices, and several types of constant tension rewinders, which may be mechanically, hydraulically, or electronically operated.

Ink Drying

Modern, high speed flexographic presses are equipped with some means of drying the ink. Partial drying is effected between each color and complete drying after the final color has been printed. Most presses perform the drying operation by blowing heated air upon the web, the air flow being directed in the opposite direction to the web travel. There are other methods, such as the application of superheated steam to a traveling web, or infrared heating, but the hot air method is by far the most popular, and most widely used.

For the printing of Cellophane, in addition to the hot air an open gas flame may be used. The web travels through or over the flame after being exposed to the hot air. The high temperature of the flame softens the coating on the Cellophane so the ink may form an effective bond. Since the inks that are used tend to be softened by high temperatures, the web is cooled by passing it over a drum with circulating cold water before the material is rewound.

Infeed systems are provided to insure good register for multi-color printing. The function of the infeed system is to synchronize the surface speed of the web with the surface speed of the printing plates, particularly when the press is accelerated or decelerated.

In the printing section, ink pumps can be supplied to provide a constant flow of ink at all speeds, for better uniformity of color throughout the run.

The upper fountain roller which supplies the ink to the printing plates, can be a mechanically engraved metal roller to secure better ink distribution. This

Printing Executive Comes Up with Idea—Walter F. Lake, Production Supt. of Laurance Press Co., Cedar Rapids, Ia., was instrumental in organizing a Drive Like a Christian campaign designed to reduce automobile accidents. Groups desiring to sponsor local DLC (Drive Like a Christian) campaigns may contact Lake at the Hearthside Class, 1017 C Ave., N.W., Cedar Rapids, Ia.

Advantages and Disadvantages of Flexography

Advantages of Flexography

(1) No press Makeready—By using a makeready machine it is possible to set up multicolor plates in register while the press is in operation.

(2) Long Plate Life—Runs up to 5 million impressions per plate.

(3) High Speeds—Since as many as six colors are being printed at one time, at speeds ranging from 300 to 1000 ft. per min., economies can be effected. Since a flexographic press has no reciprocating actions, maximum production is obtained because the press is printing all the time as compared to conventional presses which print intermittently.

(4) Continuous printing can be done. A plate roller of any circumference can be made to print a continuous pattern which can be cut to any length.

(5) The printed stock can be supplied in rolls. This has become an important item with the development of high speed wrapping and packaging machinery. Paper stock supplied in rolls is usually cheaper than when supplied in sheets. For long runs this can be a considerable saving.

(6) The quick drying feature of the inks enables the operator to see the end result immediately after printing—it makes possible secondary or inline operations without any waiting period.

(7) Solid, brilliant colors can be readily printed on flexographic equipment.

(8) Under certain conditions it is possible to print on both sides of the web at one time. Safety papers, decorated writing papers, and envelopes are printed at paper mills on presses arranged for duplex printing.

Disadvantages of Flexography

(1) The overall quality, especially for fine type matter and other delicate areas is not as good, on the average, as the best letterpress, gravure or offset work.

(2) The printing of halftones is very limited. Constant improvement is being made and some of the more quality conscious and most experienced plants are doing some halftone work. Process printing, although done occasionally is not yet recommended for this method.

(3) Small runs do not lend themselves to this process. The stock must be supplied in roll form, and while Cellophane may be obtained in any quantity in any width this is not true for most grades of paper.

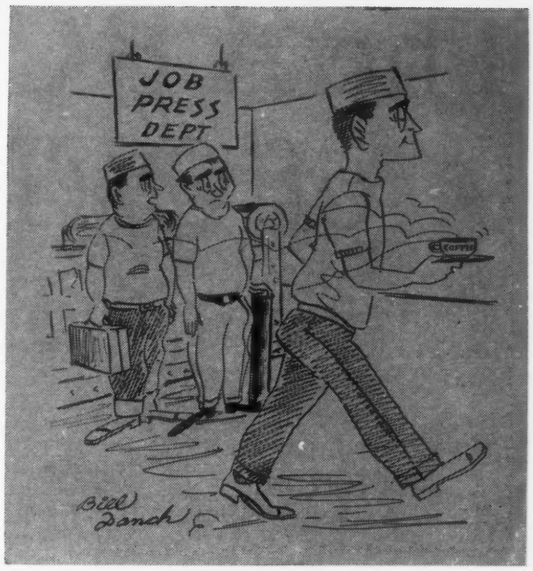
(4) The fountains on a flexographic press cannot be split as on a letterpress. This disadvantage is somewhat offset by low cost of additional colors.

THE SPEECH THAT WAS NOT DELIVERED

Basil Parsons is a parliamentarian. He has weathered many caucus (nomination) meetings of the Intl. Assoc. of Printing House Craftsmen. Parsons is Secretary of the Thomson-National Press Co., Franklin, Mass. He is accepted by all opposing factions at the Association's annual political meetings because of his smooth presiding abilities and neutral attitudes. These meetings almost always convene at 11:30 or 12 o'clock on the night before the last day of the convention. The decision of the 50 to 90 voting delegates (although there may be as many as 350 Craftsmen in the room) is cheerfully accepted as binding. On occasion in the past, meetings have lasted until 4 or 5 o'clock in the morning. Tense situations have developed from time to time, but Parsons has always seemed able to keep everybody having an officer objective on an even keel. Occasionally, this is done by telling a humorous story or quoting direct from the Bible.

What we really started out to tell you is that Parsons was somewhat nonplussed immediately after announcing that the 1954 caucus meeting at Philadelphia's Bellevue-Stratford Hotel would accept proposals (invitations) from Craftsmen in cities wanting to entertain the 1956 Craftsmen's convention. There was a momentary lull in voices as Perry R. Long, (first Intl. Craftsman President) deliberately approached the platform with a fistful of attractive and persuasive propaganda from the City of Los Angeles, Chamber of Commerce, Los Angeles Craftsmen's Club and prominent citizens as to why the 1956 convention should be held in that city. The genial emissary from Los Angeles hesitated on the floor in front of the microphone, waved aloft the carefully prepared manuscript and official invitations from Los Angeles' best citizens. Everyone in the room prepared to listen. Long said: "Fellows, I have here in my hand a speech which will take me 20 min. to deliver. If you don't want to hear this speech in which I'll tell you how badly we want you to come to Los Angeles in 1956 you'd better just say you'll accept the invitation." Instantly, Robert (Bob) Hueslein (Indianapolis Craftsman) motioned: "I move we give it to him and hold the 1956 convention in the city called Los Angeles." There were a number of seconds. Shaking his shining dome nonplussedly because of the unusual procedure, Chairman Parsons put the motion to a vote. The matter was settled that quick.

" — he specializes in long press runs only!"



method, known as the Anilox method, is widely used.

Press Production Controls

Means can be provided for engaging or disengaging all printing plates at one time from one position, for such periods when the press is not printing. Another refinement enables the fountain rollers to rotate when the press is idle. This action is used to prevent the ink from drying on the rollers. Both of these functions can be combined. The action may be either mechanically or hydraulically operated.

Rotary register controls can be motorized so that all corrections can be made from one or more control positions on the press.

Viewing devices have been perfected which permit the operator to examine the printing while the web is moving at high speeds.

Flexographic Inks

Chairman Wittel introduced Douglas E. Tuttle of Interchemical Corporation, Printing Ink Div., New York, N. Y. The summary of Tuttle's address is as follows:

Flexographic inks dry from 12 to 15 sec. as contrasted with letterpress paste type inks which dry in from 4 to 12 hrs. Flexographic printing is a separate process and the inks which are fast drying cannot be used on rollers designed for the paste type inks.

In Flexography, press impression is reduced as nearly as possible to the vanishing point. At the point where the ink is applied to the plate, this viscosity is about on a par with average news ink with the difference that flexographic inks are exceedingly fast drying. Viscosity, of course, varies according to the evaporation range.

In overprinting by Flexography, the first down ink is the tackiest. The success in using inks in Flexography is dependent upon the pressman's ability to modify inks for best results.

Flexographic inks may be used on all kinds of stock ranging from 4 lb. tissue to foils and other metallic stocks. The inks possess a freedom from objectionable odors. Use of the flexographic process has had the greatest growth in the packaging and in some publication fields.

Discussion

Someone in the audience wanted to know if there have been any new techniques for compensating in art work for stretch in the plates when preparing to print a two color job. Mr. Bass replied: "Unfortunately no." He stated that distortion or bad register is overcome mostly by guesswork.

Gradie Oakes stated that in the case of a two color candy wrapper, after the plates are made, one of the circles looked like an egg in shape. The original zinc plates were made over to the diameter of the plate cylinder, were proofed on white rubber, and then the job was reshot.

Someone in the audience explained that in a job of considerable size the blue ink on a board job rubbed off. He wanted to know the reason. It was explained that the darkness of the color would have a bearing on the ruboff. The lighter the color the less obvious will be the ruboff. If varnish is used, ruboff will not occur. Certain pigments cause trouble with ruboff but the main thing is to consider the darkness of color and contrast of stock upon which the job is printed. The Craftsman asking the question explained that the ruboff occurred during shipment in a railroad car and only on the blue ink. It was further explained that if the pressman cuts the varnish back with alcohol ruboff will occur.

In answer to a question, Mr. Zuckerman said that in the drying operation where the flame type of dryer is used, moisture is added to the heat to avoid causing the stock to become brittle.

Safety Training Leaflets

Accident Preventers, the National Safety Council's new employee training leaflets, are packed with illustrations and tips on how to stay safe on the job. Using few words but plenty of colorful cartoons, the pocket-size leaflets are designed to teach safety to today's worker. Tips on lifting, housekeeping, clothing and hand tools are included. Sample copies and quantity prices may be obtained from the National Safety Council, 425 N. Michigan Ave., Chicago 11.

The ABC of OFFSET

For Letterpress Printers

Series Two

By George Jos. Lenzer

XXII—DOT ETCHERS MUST THINK

(Continued)

COLOR values in halftone reproduction are as important to the creative artist, ad-man, printing salesman and the buyer of printed matter as it is to the color correctionist and stripper who executes or recreates the job in color ink.

When job instructions are given in connection with a new color job, it is common to hear the following, "Use the regular *standard* colors, yellow, red, blue and black." We may well reply to that statement with the question: "Whose?"

"Whose *standard* inks?" It will be remembered that no universal standard of offset or other inks exist. Each manufacturer produces his own set of standard colors. Each set of standard colors varies widely in hue, quality, concentration and in as many other ways as there are makers and users of the many varieties of inks.

Failure to be specific when giving instructions for color reproduction automatically tosses the responsibility for the outcome of a job into the lap of the correctionist, stripper or pressman. Then, if the final results do not come up to expectations, there's a loud cry that someone had sabotaged the job. Who is the saboteur? Why, he's the guy who failed to name the specific standard inks, their names and numbers and the name of the manufacturer.

Giving names and numbers alone is not sufficient information. Color swatches of the specific inks should also be provided.

Occasionally, some bright individual demands that a certain color be used in producing his job. He submits a color swatch of printed paper which was cut out of a printed sheet from another job. Such a color swatch is misleading because it may be a bastard color obtained by the overprinting of one color over another. This particular color may not lend itself to the job as a working color because of its nature.

The inkmaker can match the color by mixing pigments, but, there is a big difference between mixing pigments and obtaining similar effects by printing inks of different color on paper or other materials. The final results may be the same, but the approach to accomplishment will have been quite different.

Where the inkmaker obtains his results in terms of pounds, ounces, quarts and gallons of oils, pigments, driers and varnishes, the correctionist and stripper must deal with prepared colors in terms of solids and percentages of those solids. Hence, the importance of color swatches of the inks themselves.

Color Mixologists

Where the inkmaker can add a white pigment to his ink, the color artist or correctionist must utilize a proportionate area of white paper. The inkmaker or color matcher may use a substance to extend or increase the dispersion of the colorant in an ink, thus rendering that ink weaker or less powerful in color. To obtain the same or a similar effect of lighter or weaker color, the artist or correctionist reduces the size of the halftone dots.

The strength or weakness of a specific color can be regulated and even changed or altered while in the press by varying ink flow, changing pressure and by altering the plate or blanket packing. The ink may also be made to print darker or lighter through ink emulsification, dirty dampers and an imbalance in the dampening fountain solution pH values.

Here then, we see that several outside factors prevail by which the best efforts of a dot etcher or correctionist can be thrown into a cocked hat. What happens on the press must be treated separately. Therefore we will confine this portion of our discussion to color and certain color effects with which the artist or dot etcher is most concerned.

The Color Wheel

Let's draw an equilateral triangle. That is a pyramid in which all three sides are equal (△).

With a compass inscribe a circle encircling the triangle, having the circle touch each of the three points of the triangle. This is the basis of our color wheel, around and through which we will be able to locate our colors.

At each point of the triangle we will place the name of a primary color. Yellow, at the top point; red, at the lower right hand point and blue, at the lower left hand intersection. These colors must of course be pure, uncontaminated pigments. That is to say, the yellow must be pure, not reddish nor blue or greenish. The red must be free of yellow or bluish tinge, while the blue must not be greenish or reddish. From these primaries, all other visible colors are theoretically obtainable.

Secondary Colors

If we follow around the circle and make an equal division between each set of two primary color points, we will then establish secondary color points. Exactly halfway between the yellow and blue points we will mark the new point as green. In like manner, between the yellow and red we establish orange and between red and blue, we find purple is the new color designation.

Secondary colors are mixed with equal parts of any two primary colors and these are complementary to the primary color opposite.

By varying the amounts of the compounding primary colors, each secondary color is identified by that primary which predominates in the mixture.

Secondary Colors

Where the yellow is in excess of the blue, we call the color a yellow green or a greenish yellow, depending upon the percentage of excess. When the blue is in excess and the yellow is reduced in quantity, the color may then be designated as a blue green or a greenish blue. The same rule applies to the other two secondaries, *i.e.*, yellow orange or red orange, etc.

Tertiary Colors

Tertiary colors are those which are obtained by mixing one primary color with one secondary color, or by mixing one secondary color with another secondary color. In either case, the resulting tertiary color will be some particular

Resistance to Change

(Abstracted from an address delivered by Richard W. Gardner, Jahn Ollier Engraving Co., Chicago, before the 35th Annual Convention of the Intl. Assoc. of Printing House Craftsmen, Philadelphia, August 1954)

THERE are many things that photoengraving can and must do to survive. Resistance to change is a human trait and is usually strongest in those who have achieved success. Furthermore, it is much easier to recognize the need for change in others far more readily than we can see the same need in ourselves. There might be some justification for opposing change if we were living in a static world, but we are not and probably never will be. As a result we must change to meet changing conditions and needs.

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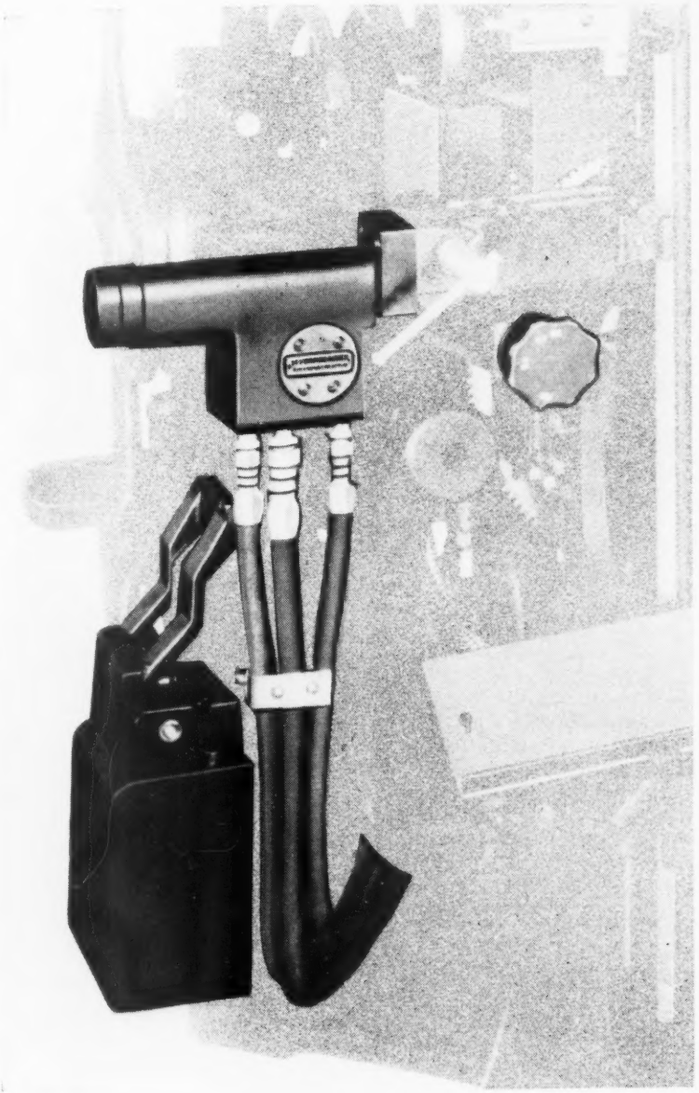

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shade of brown. Depending upon the predominating color, the brown may be yellowish, orangey, reddish, purplish, bluish or greenish.

Grays

When we mix equal parts of all three primary colors, we come up with a neutral gray. If we permit any single primary to predominate or be in excess over the other two the gray will carry a name favoring the color in excess, such as, a yellowish gray, reddish gray or blue gray.

Tints

Tints of any of the major colors listed can be obtained by the addition of white or by creating a greater color dispersion through the addition of a color-free ink extender or weakener. The consistency of the ink is not altered to any great degree by the addition of these mediums. Adding white will render a transparent ink more opaque.

Shades

Shades of colors may be obtained either by printing ink in a heavier layer or by the addition of neutral gray or black in varying amounts.

Many particular shades or tints of colors cannot be mixed with the colors specified in our color wheel. These may require a predominance of white or black before the particular color can be obtained. For example: chocolate brown is a mixture of white, red and black, with the white predominating. An umber brown is obtained by mixing white, red, yellow and black, with the pigments predominating in the order given. A more extensive list of special color mixtures and effects is appended in the accompanying chart.

Printing and Overprinting Color Inks

All prepared color inks and specially mixed inks are base colors with which the correctionist or dot etcher is concerned. With these he must achieve the ultimate results desired and expected by the client or buyer of color printing.

In halftone reproduction, the artist or dot etcher must realize that the variations in color effects are obtained by the overprinting or overlapping of all the colored inks being employed on the specific job. Barring the use of opaque inks, we will confine our discussion to the use of transparent inks only.

Transparent Ink

Why does the printed ink become opaque if it is transparent originally? This is a good question and one that is frequently asked by the uninitiated tyro.

Transparent ink when applied to a transparent material may be viewed by transmitted light. Under these conditions the color will appear to be lighter or weaker in tone and value. When it is printed on paper or any opaque or semi-opaque material the ink takes on the appearance of opacity because it is then viewed by reflected light, and it seems to be darker. This is because of the extreme contrast effected between the solid ink impression and the reflectability of the printed material.

Transparent ink has the added advantage of serving as a light filter capable of absorbing certain light rays while at the same time reflecting others. When we overprint colors of specific wave lengths with colors of longer or shorter wave lengths, the resulting color sensation is that of the combined reflectability and absorbency of the overprinted colored inks. Hence, a blue overprinting a yellow will produce a green; blue over red will produce a purple and a red over yellow will give us an orange color. Effects such as these are unobtainable with opaque colors, because being opaque, each overprinting color retains its own original color and automatically blanks out the underlying color much like painting a red paint over a green paint. The green paint is hidden and only the red color is visible.

Co-operation—A Recap

As we prepare to return to our discussion of Stripping it is hoped that our discourse on color and halftone effects will have left its mark in the minds of our readers who are vitally interested in halftone reproduction, especially in offset-lithography.

It is hoped too, that the many problems affecting and confronting the dot etcher, color correctionist and color stripper will be carefully considered. Every assistance in precise and complete information must be afforded, so that work of the highest quality can be produced economically and efficiently. This means co-operation of the highest order.

It must be remembered that co-operation is not the duty of one individual alone, but of everyone associated with the production of every job, from the original creation to the final impression. Any breach in line of co-operation can only lead to trouble and possible disaster.

Photographic Color Proofing

Our present day increase in demand for color printing has set off a mad race to develop a process of photographic color proofing. In all quarters of the country, someone is trying to find the answer. Because this idea is a direct link between color correction, dot etching and stripping, it is felt that this subject should be treated as a prelude to our return to the subject of Stripping. We will begin our discussion of Photographic Color Proofing in our next installment.

(To Be Continued)

INK MIXING AND OVERPRINTING CHART

The name of the color to be mixed is indicated by bold face type. The base ingredient inks from which the colors are mixed follow in light face. The first named color predominates, the others are mixed in proportion:

BROWN (Chocolate)....White, red, black
BROWN (Sienna).Orange lake, black
BROWN (Snuff)..Yellow, Bismarck brown
BROWN (Umber).White, red, yellow, black
GREEN (Dark)...Lemon yellow, Milori blue
GREEN (Grass)..Lemon yellow, peacock blue
GREEN (Olive)..Orange lake, process blue
MAGENTA.....Process red, purple
MAHOGANY..Yellow, orange, black
ORANGE.....Yellow, red
PURPLE.....Process red, process blue
VIOLET.....White, process red, process blue

TINTS

BLUE (Light)....White, Milori blue
BLUE (Dark).....White, bronze blue
BLUE (Sky).....White, Cerulean or peacock blue
BUFF.....White, yellow, orange
CREAM.....White, yellow
DOVE.....White, vermilion, blue
FLESH.....White, orange lake
GREEN (Light)...White, green lake, lemon yellow
GREEN (Dark)...White, green lake, blue
GRAY (Blue)....White, black
GRAY (Drab)....White, yellow, black
GRAY (Pearl)...White, black, yellow
OLD GOLD....White, Persian orange
PINK.....White, process red

OVERPRINTING

The following results are obtained when printing one color over another:

Red over yellow produces orange red
Red over blue produces purple, (reddish)
Red over green produces brown
Red over orange produces light red
Blue over red produces bluish purple
Blue over yellow produces green
Blue over green produces bottle green
Yellow over brown produces golden brown
Yellow over blue produces yellow green
Yellow over purple produces dull, drab green
Black over any color is intensified

Plate Coating Bulletin

The Army Map Service has released a 22-page bulletin, AMS Bulletin No. 32, in which are described the characteristics, use and results obtained with a photo-sensitive coating called Metalife for offset surface plates. Also described are procedures for preparation of grained and grainless plates, production of plates for long runs, as well as plates that are relatively unaffected by atmospheric changes. Copies of the bulletin are available. Please mention PEE No. 238 in your request.

24 k. Gold Leaf

Lustrogold, a 24 k. gold leaf said to be made by a special process, has been announced by General Roll Leaf Mfg. Co. Sponsor claims it provides improved brilliance, definition, coverage and workability. Illustrated literature on Lustrogold and other genuine and imitation golds and silvers, pigments and metallic colors is available. Please mention PEE No. 250 in your request.

Scientifically TESTED... and TESTED again by TIME

Tested step by step through manufacture in America's most modern roller-making plant; tested as to raw materials; tested for proper balance of ingredients; tested for size, for ruggedness, for potential performance . . . yes, tested scrupulously for each and every factor that may influence ultimate service—that's the impressive record behind every AMERICAN ROLLER that leaves this plant. No wonder they later test out perfectly on the presses of so many leading printers and lithographers. They've got what it takes because rigid controls gave it to them; they're tough because competent know-how instilled them with toughness under the most relentless factory regulations known in the industry. That's why they're supreme on today's high speed presses. Order them for your plant and see the difference.

ORDER WINTER ROLLERS NOW!

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ROLLERS

ALL-SYNTHETIC
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MAKE READY PASTE
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DRESSING

AMERICAN ROLLER CO., *1342 N. Halsted, Chicago 22 • 225 N. New Jersey, Indianapolis 4*

Low-cost make-ready... ...for future profits

Every Feature for Efficiency and Long Service

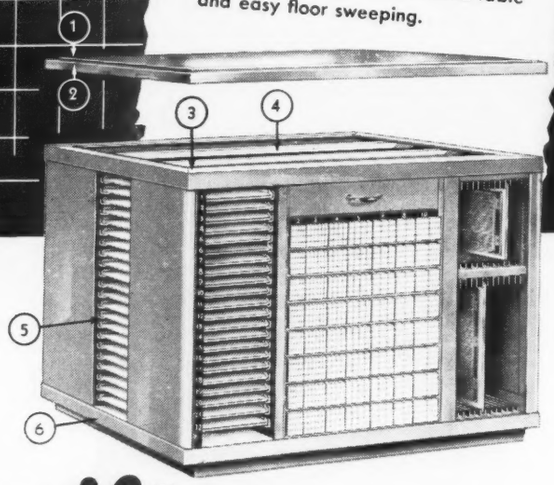
1&2. Hamilton cast-iron imposing surfaces are ground and polished for high-precision accuracy. Heavy rib construction underneath.

3. Corner construction is sturdy, welded assembly of heavy sheet-steel rails and upright.

4. Frame has heavy gauge steel base with vertical uprights and cross frames to support tops at inner points.

5. Except for two smaller sizes, all tables have open panels at end for units for Galleys, Chase Racks, etc. When not used are covered with steel panel.

6. Recessed base construction for adequate toe space all around table and easy floor sweeping.



Hamilton Imposing Tables

Here's the economical way to get ready for growing business and then *make it grow*. Install a Hamilton imposing table now for labor- and time-savings, and faster, smoother handling of better work. Efficient, right-priced work that brings customers back for more—keeps your profits mounting. See the complete Hamilton line at your dealer's now.

Hamilton PRINTING EQUIPMENT

HAMILTON MANUFACTURING COMPANY · Two Rivers, Wisconsin

Blocking Material Developed by PER

By HOMER L. GREEN*

**President, Photo-Engravers Research, Inc., and President, Wilson Engraving Co., Dallas, Tex.*

THE shortcomings of wood for use as a plate mounting material has been recognized by printers and platemakers for many years. Much money has been spent by various companies, agencies, and individuals to develop a satisfactory substitute for wood. Among the possible substitutes developed have been resin-bonded wood chip and wood-flour mixtures, bituminous-bonded wood mixtures, ceramics, rubber-resin compositions, laminated wood combinations, plastics, and a number of chemically treated woods.

In evaluating such products, it is first necessary to determine the properties of an ideal material. Photo-Engravers Research, Inc., decided to include work on an improved blocking material in the program of research, being sponsored at Battelle Memorial Institute, Columbus, O. The work has been in progress for nine years on theoretical and practical studies directed to various technical problems confronting the photoengraving industry. In the identification of the ideal properties of a mounting material, it was decided that the most important functional characteristics was that of dimensional stability at extremes of atmospheric conditions. A test procedure to determine accurately the tendency for a material to warp, swell, or shrink when exposed to various conditions of humidity was devised. The behavior of experimental products was compared with currently available commercial wood blocking. Those materials exhibiting superior dimensional stability were further evaluated for plate adhesion, resistance to printing and molding pressures, resistance to ink and plate washes, machinability, cost, weight, and availability.

Of the various materials examined, ceramic materials seemed to be the most promising class. Quite a few formulations were prepared in the laboratory and evaluated. Efforts were made to combine the superior dimensional properties of ceramic materials in a product having satisfactory weight, cost, and machinability. Various commercial materials of a ceramic composition were included in the laboratory evaluations. The Trancell materials, manufactured by the Johns-Manville Sales Corp., came the nearest to being generally satisfactory. These materials are made of asbestos with inorganic binders molded into a sheet by pressure. Trancell HW was found to be the most suitable of the Trancell materials available and came the closest to an ideal mounting material. It was found to be insufficently uniform in thickness as supplied for use as a mounting for photoengravings.

In cooperation with Battelle and Johns-Manville, the Wells Mfg. Co. developed suitable methods for grinding Trancell HW to the required thickness and uniformity of thickness. The Wells Mfg. Co. is an associate member of Photo-Engravers Research, Inc. Also developed was a resin sizer for the surface and applied as an adhesive suitable for plate mount-

Carbon Tissue Transfer Machine — Development of a Carbon Tissue Transfer Machine which will handle rotogravure cylinders of a large range of lengths and circumferences has been announced by George F. Motter's Sons. The unit is designed basically for the production plants where rotogravure cylinders of various sizes are etched. Sponsor states the design permits easy adjustment from one size to another and provides controls for accurate transfer of the carbon tissue to the cylinder. The same type of roller bearing construction as used on Motter's presses has been built into the machine. It is claimed all parts are machined to close tolerances for accurate carbon tissue transfer. Precision marking and registering devices are included as standard equipment. More information may be obtained by mentioning PEE No. 273 in your request.

ing. The product was shop tested, and the results confirmed the laboratory tests on dimensional stability. The several printers that cooperated in this work consistently reported a material reduction in makeready time through the use of plates mounted on the new base.

The Wells Mfg. Co. is now producing this blocking material for the industry under the trade name of Wellite. Wellite is a stable, nonwarping plate mounting. It can be used for a printing base and as a mounting in duplicate plate molding.

Photo-Engravers Research, Inc., is comprised of a group of 64 photoengraving companies, organized in 1945 to conduct technical research to improve the photoengraving processes. Its work has been conducted at Battelle Memorial Institute. The major part of the research program has been devoted to studies of the etching processes. Improvements and standardization of etching on zinc, copper, and magnesium have been developed. The essential results of these studies have been published in five publications that may be purchased by nonmembers of Photo-Engravers Research, Inc. This was made possible through an industry-minded policy of the organization. It is proposed to continue and expand the research activities to cover various operations and processes in the manufacture of photoengravings.

Printing Week Winner

Designs submitted by Emil Georg Sahlin of Buffalo, N. Y., have been selected by judging committees for both the official 1955 Intl. Printing Week poster and stamp. Both contests are sponsored by the Intl. Assoc. of Printing House Craftsmen.

The stamp contest judges awarded Certificates of Honorable Mention to J. Edward Schwartzer, Everybody's Publishing Co., Hanover, Pa.; John A. Hoermle, Warner P. Simpson Co., Columbus, O.; and Edward R. Ahrens, jr., Manhardt Printing Co., Inc., Buffalo, N. Y.

Contest judges were Chairman Richard J. Hoffman, Head, Graphic Arts Dept., Los Angeles (Calif.) City College; John L. Sarver, Owner, Advertising Art, Long Beach, Calif., and Paul V. Greene, Owner, Creative Printing Co., Inglewood, Calif., and President, Santa Monica Bay Craftsmen's Club.

The poster contest judges awarded Certificates of Honorable Mention to Harry Roth and Duke Senogles, Topeka, Kan.; and Steve Sluka, Vogue-Wright Studios, Chicago.

Judges for the contest were Chairman J. L. Frazier, Consulting Editor, *The Inland Printer*; R. Hunter Middleton, Director of Typography, Ludlow Typograph Co.; and David B. Eisenberg, Editor, *Graphic Arts Monthly*.

Presentations of the awards were made by Floyd C. Larson, Intl. Printing Week Chairman, during the Philadelphia Intl. Craftsmen's Convention.

This design done by E. G. Sahlin, Buffalo, N. Y., has been adopted as the official emblem of 1955 Printing Week.

Official poster design for 1955 Printing Week designed by E. G. Sahlin, Buffalo, N. Y.

Safety Council To Meet

A panel discussion on standardization of button controls and signalling devices on printing presses will highlight the printing and publishing sessions of the 42nd Natl. Safety Congress and Exposition in Chicago Oct. 18-22. The discussion, scheduled for Oct. 18, will be led by Peter J. Bernard, Director, Personnel and Safety, H. Wolff Book Mfg. Co., New York, N. Y., and General Chairman of the Natl. Safety Council's Printing and Publishing Section. Other speakers will be G. W. Heumann, Consulting Engineer, Industry Control Dept., General Electric Co.; M. L. Priban, Chief Engineer, Cline Electric Mfg. Co., and W. H. Rouse, Asst. Engineering Supervisor, Cutler-Hammer, Inc. Members of the panel have been active in formulating the American Standard Code on button controls and signalling devices. On Oct. 20 Olin Freedman, Graphic Arts Management Consultant, will discuss incorporation of safety in printing plants. An illustrated talk on safety devices for guillotine cutters will be presented by Allen L. Cobb, Safety Director, and Lloyd Werth, Equipment Engineer, Paper Finishing Div. The program will be concluded with a talk by Carl O. Siebke, Chief Engineer, Miller Printing Machinery Co. Sessions of general interest will be presented by the American Society of Safety Engineers. Some of the topics to be covered are safe handling of materials, industrial noise, accident costs, nuclear developments, civil defense, industrial solvents, better seeing and effective communications for improved safety.

DON'T BE DISCOURAGED— ENTER YOUR SPECIMENS

It is reported that some commercial printers in different parts of the United States don't intend to enter the 1954 PIA Printers' and Lithographers' Self Advertising Exhibition and Awards. The reason is that their entries in previous years failed to receive an award. Since their advertising hasn't changed much, they feel there is little chance of becoming an award winner in the 1954 contest.

Printing Equipment Engineer is informed that this attitude has been anticipated. In order to give individual entrants an equal chance, new judges are chosen each year. The judges are always top flight men in the advertising field. By changing the judges the award winners are determined through different points of view in each contest.

It would seem that previously disappointed commercial printers should reconsider their decision not to enter the 1954 contest. By entering, each commercial printer is helping along his industry to more effective usefulness—and who knows, perhaps the pieces submitted might "ring the bell" with the new judges.

Ultron Vinyl Sheets

Production of Ultron vinyl sheets for advertising specialties has been announced by officials of Monsanto Chemical Co.'s Plastic Div. F. W. Woodhill, Sales Mgr. of Ultron sheets, said the formulation was designated as Ultron R 309. Available in matte finish opaque white and calendared translucent white, in various gauges, the material is also usable as corrugated strips for fluorescent light diffusion, sponsor claims. When writing for further information, please request PEE No. 253.

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WELLITE®

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MINERAL MOUNTING BASE

To solve the problems and remove the difficulties caused by the unstability of wood mountings.

This Material . . .

Has been tested and proven by Photo Engravers Research, Inc., Engravers, and Printers, under all climatic conditions.

Is Found To Be . .

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- **Uniform**
- **Dependable**

Is not affected by heat in flush plate mounting.

Reduce Your Press Down Time and Makeready by having all your plates mounted on WELLITE, available to all engravers, electrotypers and Graphic Arts Industry.

For further information write

WELLS MANUFACTURING CO.

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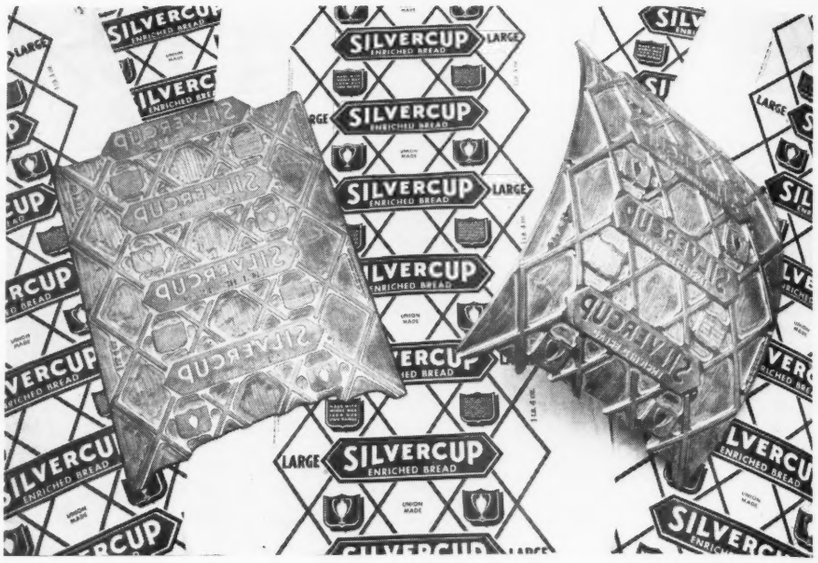


At left is a flat magnesium plate after etching and routing and ready to be proved in flat form. At right is the same plate after it has been curved to exact contour for rotary press plate cylinder. The background for both plates is a bread wrapper printed from precision plate curved by the Magplate Corporation method.

Precision Magnesium Plates —Precision Curving Service

MAGPLATE Corporation has developed a high precision printing plate for photoengravers. Made of magnesium it is reported the dimensions can be held to very close tolerances, reducing the need for press makeready. Announcement has also been made of a method for precision curving of magnesium plates for rotary printing presses. These products have been developed by Detroit Colortype Co. and Brooks and Perkins, Inc., Detroit, after two years of experimental work. Magplate Corporation officers are Robert Vanderkloot, Detroit Colortype, President; K. C. Reeves, Vice President and Frederick M. Seitz, Secy.-Treas. The latter are officers of Brooks and Perkins, Inc.

Stock sizes and gauges of flat Magplate before curving are: 0.065 in. by 18 in. by 36 in.; 0.065 in. by 22 in. by 36 in.; 0.065 in. by 24 in. by 36 in.; 0.1522 in. by 18 in. by 36 in.; 0.1522 in. by 22 in. by 36 in.; 0.180 in. by 24 in. by 36 in.; 0.250 in. by 24 in. by 36 in.

Other sizes, in these gauges, up to 26 in. by 56 in. can be supplied and are made to the same precision thickness tolerances. If this precision magnesium plate is used with closely controlled metal base, makeready can be reduced greatly.

Magnesium is being used successfully for half-tone work, all the way from 55 line to 150 line screen. Four color magnesium plate jobs have been successfully run on both flatbed and rotary press.

In August 1953, Brooks and Perkins, Inc., announced a new method of curving magnesium plate for rotary press work. Plate curving details are not available because of patent jeopardy. However, the following details have been released: The magnesium plate is etched in the flat. Dead metal and extra routing after curving are eliminated. Etching, routing and tooling are done in the flat, simplifying the making of rotary press plates, and making every photoengraver a potential producer of curved plates for rotary presses. The proofing is done in the flat. Then the flat is curved by precision methods to the press cylinder contour required. The plate is now ready to be put on the press and run. Backup plates (saddles) are not used. The light weight magnesium plate does not tend to fly off the press at high speeds.

Thickness variation throughout each plate and from plate to plate it is claimed, does not exceed 0.0005 in.

Dayton Printing Courses

In September, new Graphic Arts courses will be offered at the University of Dayton and Sinclair College, Dayton, according to a recent announcement by officials of the Dayton Graphic Arts Management Education Council. The educational program for printing industry personnel was planned by a committee including Kenneth P. Morse of Standard Register Co., Howard Massman, Printing Trades Coordinator of Dayton Public Schools' Vocational Education Dept.; Fred G. Rost, Lester C. Giele, and representatives of the University and College. The University also offers two two-year courses that also may be completed in a longer period of part-time study. One course provides an associate in engineering degree specializing in printing technology, and the other an associate in business administration specializing in printing management. Sinclair College curricula also includes courses in Graphic Arts management and technology; Dayton Art Institute, a Graphic Arts design course, and Dayton's Vocational Education Dept., Graphic Arts management courses, Massman said.

Patents

For The GRAPHIC ARTS

Covering patents issued June 1, 8, 15, 22 and 29.

BINDING, CUTTING, PERFORATION:

2,679,901. NOTCHING OF SIGNATURES FOR GLUED BOOKS uses a die element in a surface of a body and a cooperating notching element disposed inwardly of the surface and slidably mounted on the body. The notching element has an end portion projecting outwardly beyond the die element and formed with a recess adapted to receive an edge of a sheet and provide a notching edge facing the die element. The notching element is movable inwardly relative to the body to bring notching edge into cutting relation with the die element for the notching operation. The notching machine may be attached to a rotary printing press which includes its own means for folding the signature. Invented by Alfred Cahen, Cleveland Heights, O. Unassigned. Application Apr. 15, 1949. 26 Claims.

2,680,862. APPARATUS FOR WRAPPERING BOOKS or applying flexible covers on books comprises a pair of spaced parallel walls which form a chute through which wrappered books are delivered back downwards. A platform located below the chute receives books delivered from the chute. The platform is mounted on swing links so that the platform may be oscillated in parallel motion. Each part of the platform describes an arc of a circle. The operation of the oscillating platform squares the backs of the wrappered books. Invented by Peter Crawford Girdlestone, Lansdown, Bath, England. Assigned to Altus Engineering Co. (Corsham) Ltd., Corsham, England. Application May 18, 1950. 3 Claims.

COMPOSING ROOM EQUIPMENT:

2,679,902. AUXILIARY KEYBOARD AND OPERATING MECHANISM FOR TYPESETTING, TYPECASTING, MESSAGE TRANSMISSION, TAPE PERFORATING, AND SIMILAR MACHINES is for use with such machines as the Linotype and Monotype apparatus. The arrangement provides a keyboard having keys positioned and arranged as in a standard Linotype machine keyboard for association with a tape-perforating machine, such as a Teletypesetter, having a modified standard typewriter keyboard, which will, upon operation of the keys of the machine keyboard of this invention, actuate the keys of the tape-perforating machine to perforate the tape in the normal manner of operation of the tape-perforating machine in an improved manner. An arrangement is provided for operating the machine in which a shift key or an unshift key is depressed to cause holes to be punched in the tape corresponding to the upper or lower case letters and for operating the shift and unshift keys upon depression, respectively, of the upper case or lower case keys of the keyboard, separate upper case and lower case keys being provided. Invented by Claire N. Brewer, Huntington, W. Va. Assigned to Unitypo, Inc., Indianapolis, Ind. Application Apr. 7, 1953. 17 Claims.

2,679,923. CONTROL UNIT FOR COMPOSING MACHINE is applicable to standard types of line casting machines, the unit comprising a series of permutation elements settable in predetermined positions and a set of function control bars for a plurality of function mechanisms which are selectable by permutation elements. An operating bail common to function control bars is operated by a toggle device comprising a first element pivotally articulated to a second element and connected to an eccentric drive which imparts alternatively a collapsing and straightening action to toggle device. Second element is connected to bail and a device having engageable shouldered facilities cooperable with extremities of respective function control bars. Invented by Walter J. Zenner, Des Plaines, Ill. Assigned, by mesne assignments, to Teletypesetter Corp., Chicago. Application July 18, 1952. 8 Claims.

2,681,139. TYPOGRAPHICAL COMPOSING MACHINE features an automatic safety device, suitable for use with Linotype machines. The safety device includes an assembler slide which is provided with a device which may be adjusted thereon according to the length of line which it is desired to compose. When the composition of the line is completed, the friction brake is first momentarily released to tighten the line to its true measure, and the position of the pre-adjusted device will permit or prevent the operation of a locking mechanism for the assembler elevator according to the length of the line. Invented by Louis Rossetto, Kings Point, N. Y. Assigned to Mergenthaler Linotype Co. Brooklyn, N. Y. Application July 9, 1952. 3 Claims.

2,681,138. TYPOGRAPHICAL COMPOSING MACHINE insures that only lines of proper length and within justification range will be presented to a casting mechanism. By setting the long finger of the line delivery slide according to the length of line to be cast, the distance between the fingers is used to measure the line while it is being raised by the assembler elevator. Since the elevator in its uppermost position releases the line delivery carriage and since the release of the line delivery carriage initiates the automatic cycle of the machine, an excellent opportunity is thus afforded to measure the line accurately before the release of the delivery carriage. If the line as it is being raised and measured between the fingers is either too long or too short, the line delivery carriage is positively locked out of operation, preventing transfer of line and holding line in delivery carriage with machine stopped until correction is made. Invented by Louis Rossetto, Flushing, N. Y. Assigned to Mergenthaler Linotype Co., Brooklyn, N. Y. Application May 9, 1952. 17 Claims.

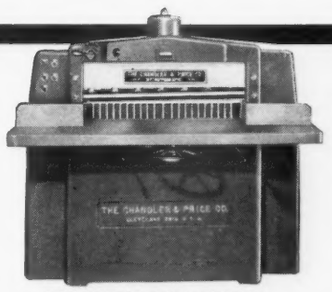
FEEDING, FOLDING, DELIVERY:

2,681,004. FEEDER FOR PRINTING MACHINES is adapted for use with printing machines including a printing table and a printing mechanism for printing on a sheet resting on the table. The feeder uses a feed table having a front and side register arrangement against which a sheet to be fed to the printing table can be placed in an accurately defined position. A feeder with at least one gripper is adapted to grip the sheet and to move a predetermined distance away from the table to feed the sheet into correct position on the printing table. The feeder is reciprocated by a rotary driving shaft. Invented by James Edward Freeborn, Broxbourne, England. Assigned to Screen Printing Machinery Ltd., London, England. Application Sept. 6, 1950; in Great Britain, Sept. 7, 1949. 16 Claims.

2,682,400. PREGATHERED FROM FEEDER is adapted to be installed upon a conventional gathering machine employed in the printing industry. The device embodies a feeder arm movable toward a hopper to engage and draw the stapled back of a form downwardly into position for engagement between a pair of gripper jaws on the end of a gripper arm. The feeder arm is then moved to an inoperative position to permit the gripper arm to withdraw and transfer the form from the hopper to an endless conveyor employed to support the signatures and pregathered forms. Invented by Robert K. Lukey, Chicago, Ill. Assigned to W. F. Hall Printing Co., Chicago. Application June 21, 1952. 9 Claims.

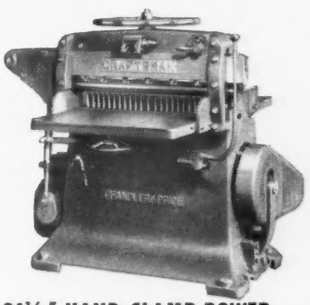
All new patents for the Graphic Arts are reported exclusively for Printing Equipment Engineer by Invention, Inc., an industrial patent research organization in Washington, D. C. Invention, Inc., presently has the only staff in the country that examines, in the U. S. Patent Office, the complete printed copy, drawing by drawing and page by page, every one of the several hundred new patents issued each week. Printing Equipment Engineer is the only trade publication in its field offering a report based on this complete coverage. For copies of the patents listed here specify the patent numbers and send 25c for each separate patent, or 10c for each trade mark or design patent (stamps not accepted) to the Commissioner of Patents, Washington, D. C.

IN THIS...THE MOST COMPLETE LINE OF PAPER CUTTERS...YOU CAN FIND A CUTTER TO MEET YOUR NEEDS!

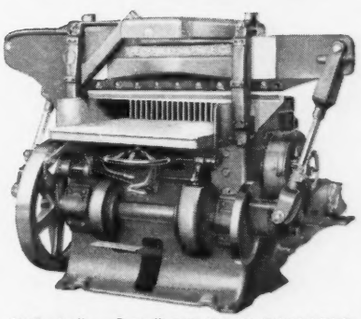


37" FULLY AUTOMATIC

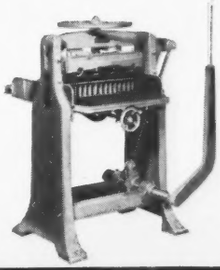
37" HAND CLAMP AUTOMATIC



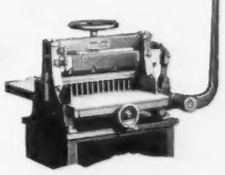
34½" HAND CLAMP POWER



39", 44" and 50" FULLY AUTOMATIC



BENCH CUTTER



26½" LEVER CUTTER

Complete bulletins describing any of these cutters are yours for the asking. Or see your nearest C&P dealer.

THE CHANDLER AND PRICE COMPANY
6000 Carnegie Avenue • Cleveland 3, Ohio

PLATEMAKING:

2,679,695. APPARATUS FOR REGISTERING PRINTING PLATES TO BE DUPLICATED provides each of a set of multicolor printing plates with a plurality of identically located register marks which are to be reproduced throughout successive stages of the duplicating process and finally serve to assist in properly positioning the plates on a printing press. A transparent removable sheet provided with two sets of parallel indicia, one set being at right angles to the other, is hinged along one edge of a bed to which the plate may be clamped after the margins of the plate are square and parallel to the indicia. Register marking punches are carried by the transparent sheet for marking the face of the plate on the bed. Invented by George W. Bungay, New York, N. Y. Assigned to Electrographic Corp., New York, N. Y. Application Dec. 26, 1950. 1 Claim.

2,680,405. METHOD FOR PREREGISTERING COLOR PLATES comprises making an impression of one plate of a set of color printing plates on a transparent sheet, applying register marks to the plate predetermined relation to impression while plate is registered therewith, successively registering the other plates of the set with the impression, and applying register marks to other plates in predetermined relation to impression. Plates are then perforated at register marks and positioned successively with perforations. The plates are then trimmed along lines in said fixed predetermined relation to perforation to provide edges on all plates in the same spatial relations to the subject matter. Invented by Harry W. Faeber, Larchmont, N. Y., and Nathaniel Bishop, Fairfield, Conn. Assigned to Time, Inc., New York, N. Y. Application Aug. 2, 1949. 2 Claims.

2,681,617. In the art of PLANOGRAPHIC PRINTING from a direct image coated planographic printing plate provided with a hydrophilic image-receptive surface having greasy hydrophobic images defining printing portions, the improvement resides in printing from the plate, applying to the printing surface of plate, after printing therefrom, a clean-up and plate preservative composition composed of a water dispersion of a finely divided water-wettable hydrophilic mineral pigment to cover unimaged areas, drying the treated plate, and then reprinting from the plate without removing the preservative from unimaged areas prior to the reprinting operation. Invented by Stephen V. Worthen, Westbrook, Me., and Charles H. Van Dusen, jr., Willoughby, O. Assigned, by direct and mesne assignments, of one-half to S. D. Warren Co., Boston, Mass., and one-half to Addressograph-Multigraph Corp., Cleveland, O. Application Nov. 28, 1947. 4 Claims.

2,682,195. DIRECT PROJECTION OPTICAL SYSTEM HAVING CONTROLLED EFFECTIVE DIAMETER OF LIGHT SOURCE is of the type used in the photolithograph industry for the enlarged reproduction of the image of a halftone negative on a light-sensitive press plate, and comprises a light source of high intensity, a reflector for light source and a pair of plano-convex lenses constituting a condensing lens system disposed in light receiving relation to reflector. A planar ground plate is disposed in light receiving relation to condensing lens system. The lenses are mounted for adjustable movement toward and away from the light source and glass plate. Invented by Richard N. Kauffman, Hillsborough, Calif. Unassigned. Application Dec. 20, 1951. 5 Claims.

2,682,463. METHOD AND MEANS FOR MULTIPLE IMAGE PRINTING AND MULTIPLE COLOR JOBS are useful in the production of printing plates by the photographic process. The sets of positive or negative films contain multiple images for color separating art work. According to the process, a multiplicity of identical images can be produced in perfect alignment on a single photographic film. This film can be used to produce a printing plate for one particular color with a multiple of identical images thereon. Invented by Harry Olsen, Seattle, Wash. Unassigned. Application Mar. 13, 1952. 2 Claims.

PRINTING PRESSES:

2,679,802. TENSION LOCKUP FOR PRINTING PLATES, for use in multicolor printing, comprises a pair of rocker arms having figures adapted for engagement with the respective circumferential extremities of an arcuate printing plate to place the same under tension, and an actuator including a toggle link connection for pivotally shifting the rocker arms and their fingers between engaged and disengaged positions relative to the plate. A circumferentially adjustable mechanical stop is located adjacent one of the rocker arms and is adapted to define the engaged position of both rocker arms. Invented by Curtis S. Crafts, Oak Park, Ill. Assigned to The Goss Printing Press Co. Chicago. Application Oct. 21, 1950. 11 Claims.

2,680,404. MULTIUNIT PRINTING PRESS includes a plurality of parallel impression cylinders disposed with their axes in a single horizontal plane and a blanket cylinder unit which is arranged in printing relation with each impression cylinder. A web feeder and guide unit directs a web from one end of the press outwardly between the impression cylinders and the blanket cylinders on one side of said plane and back between the impression cylinders and the blanket cylinders on the other side of said plane. A web reverser is positioned at end opposite the feeder. Invented by Arthur G. Royer, East Cleveland, O. Assigned to Harris-Seybold Co., Cleveland, O. Application Dec. 9, 1949. 13 Claims.

2,681,006. MULTICOLOR PRINTING INK AND PRINTING PLATE TESTING PRESS is useful for testing color effects and combinations thereof produced by a plurality of inks of various selected colors, as printed by a selected kind of printing plate. The tests permit adjustments to be made for a predetermined printing operation preparatory to carrying out such operation upon a production press. Invented by William B. Leavens, jr., Llewellyn Park, N. J. Unassigned. Application Jan. 19, 1953. 3 Claims.

2,681,007. PLATE CLAMPING MECHANISM comprises an arcuate plate having an axially extending slot and carrying a clamp to engage under a stereotype or similar printing plate to hold the plate on a printing cylinder. The arcuate plate holder is supported for circumferential movement to and from a clamping position. A crank with a pin in the slot moves the clamp and an axially slidable element with a transverse slot also engages around the pin for operating the crank. Invented by Charles A. Harless, Riverside, Conn. Assigned to R. Hoe & Co., New York, N. Y. Application June 14, 1951. 7 Claims.

2,682,027. MOTOR CONTROLLED TENSIONING APPARATUS is for use in the web supply for printing machines. The electrical network is so associated with a responsive component and with a web-tension changer on a web-roll that it will transmit electrical impulses to effect impulse actuation of the changer for as long as the responsive component is displaced from a predetermined setting corresponding to a predetermined web tension. The network includes an arrangement by which the frequency and the duration of the impulses can be varied to vary the rate of change of drag exerted on the web roll. Invented by Claude Edward Frederick Willis, Norbury, London, England. Assigned to R. Hoe & Co., Inc., New York, N. Y. Application June 2, 1949. 7 Claims.

2,682,218. PRESS CYLINDER MOUNTING MEANS provides a spring or other yieldable connection between the journal box of a cylinder and its hold-down device so that the cylinder may have limited movement to a position out of contact with the inking roll of the press and so that compression of spring by hold-down device will hold the cylinder in operative position. The hold-down device is a breech block pivotally mounted on the press frame so that it is always on the press. The breech block carries a cam lock to exert hold-down force on the spring. Invented by John R. Baumgartner, Milwaukee, Wis. Unassigned. Application Dec. 17, 1951. 5 Claims.

For Patent Research in the U. S. Patent Office, or a prompt estimate on any type of search, address INVENTION, INC. Munsey Bldg., Washington, D.C.

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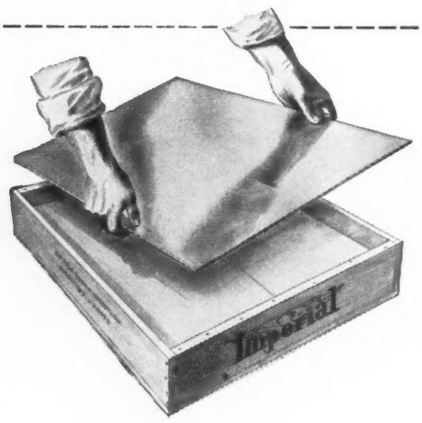

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PPR, Inc. Convenes

The election of trustees and officers, and announcements relative to research highlighted a meeting of Printing Plates Research, Inc., recently in Cleveland. Elected President was Joseph Schwartz of Wescott & Thomson, Inc., Philadelphia; First Vice Pres., Dennis Hoynes of Central Electrotype Co., Cleveland; Second Vice Pres., Charles H. McNellen of Bomac Electrotype Co., Ltd., Toronto, and Secy.-Treas., Ray E. Kreber of VanBolt-Kreber Electrotype Co., Columbus, O. Trustees are C. A. Mawicke of Pontiac Engraving & Electrotype Co., Inc., Chicago; Howard G. Schwarz of Art Electrotype Co., Cleveland, and Gene C. Meston of Capital City Printing Plate Co., Des Moines, Ia. A year's contract was signed with Battelle Memorial Institute of Columbus, covering research work on improvements in the manufacture of duplicate printing plates. A project was authorized on improving operations in the processing of sheet plastic electrotype molds. The coming year marks the 13th consecutive year that Printing Plates Research, Inc., has sponsored a program of technical research. The organization consists of 15 electrotype companies operating commercial electroype foundries.

Southwestern Graphic Arts Exposition

"WE DIDN'T think you could do it," and "One of the most comprehensive expositions ever held in the U.S.," were a couple of the nicer comments made about the Southwestern Graphic Arts Exposition, held July 3-11 in the air-conditioned Hall of Exhibits adjoining Houston's famed Shamrock Hotel.

"We didn't have a large crowd, but the kind of audience you provided for us is the kind we like best," and "We could have sold more" were among the expressions given by some equipment and supplies representatives, whose business it is to attend the various expositions and shows around the country.

"Reduce the exposition to 4 or 5 days, open from noon till 9 p.m., have it later in the year, and have another one in 4 or 5 years and we'll be back" sums up the general feeling of the 40 firms who cooperated with the promoters in bringing to the Southwest and Houston the display of letterpress and offset printing equipment and accessories.

Small letterpress and offset press equipment, up to sheet size 23 in. by 29 in., was exhibited and operated on production jobs. Also exhibited were mechanical joggers, automatic gathering machines, friction and pile feed folding machines, electronic halftone engraving machine, for 85 or 120-line screen, rubber printing platemaking machines, stripping machines, hand tools for printers, lithographers and artists, new developments in lithographic dark room supplies, including the new all-metal darkroom process camera, pre-sensitized offset plates. In addition were shown photolith film and screen process film, type composing machine parts, lettering devices, and a device for stabilizing ink control on offset presses.

Other items exhibited were carbide tipped saw blades, a rapid printer, light tables, arc lamps and vacuum frame combination, printers' rollers and an offset roller washing machine, printer's lineup table, and an art medium specifically designed to prepare art for reproduction.

Exhibited were the ingredients which go toward the manufacture of various kinds of papers, samples of papers produced by many of the leading paper mills of the country plus imported machine-made and hand-made papers from Germany, England, France, Japan and China. As an added attraction for part of the 9-day affair. Part II of New Ideas from the Old World, the finest printed matter produced in Western Europe, was on special display.

Many styles or printed-to-order manifold books, snap-apart unit sets, carbon papers and inked ribbons, a tag stringing machine, loose-leaf catalog covers, salesmen's binders, Linotype parts and accessories, were among the products exhibited.

In all about 4,000 buyers and potential buyers visited the show, coming from 23 states as well as Mexico and England. Some 100 cities were represented in the attendance.

The idea of having such a show started when representatives of the Houston Craftsmen's Club, Houston Litho Club, and Houston Graphic Arts Assoc. got together and decided the Southwest had

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Newspaper production equipment and supplies are **important** purchases. That's why Eastern brings you this message.

SERVICE—The foundation of our business. Your orders are processed quickly, carefully and dependably. Each order given special attention.

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a chance to see at first hand some of the latest developments in printing equipment and supplies. Out of this desire grew the Southwestern Graphic Arts Exhibitors, Inc., who managed the show, and it is to this small group of industry-minded people the laurels belong.

The following manufacturers, suppliers and organizations exhibited at the Southwestern Graphic Arts Exposition:

Addressograph-Multigraph Corp. (Multigraph Div.)
Alum-O-Lith Co., Inc.
American Evatype Corp.
Baum, Russell Ernest, Inc.
Binahgm's Sam'l, Scn Mfg. Co.
Bosworth, L. S., Co., Inc.
Bourges, Inc.
Brackett Strippling Machine Co.
Carpenter Paper Co.
Champion Paper & Fibre Co.
Clampitt Paper Co.
Coxhead, Ralph Co., Corp.
E. I. du Pont de Nemours Co.
Disston, Henry, & Sons, Inc.
Ennis Tag & Salesbook Co. (American Carbon Paper Mfg. Co.
Fairchild Camera & Instrument Corp.
Graeber Stringing & Wiring Machine Co.
Heidelberg Southern Sales Co.
Heinn Co., The
Hi-Speed Litho Supply Co.
Houston Club of Printing House Craftsmen
Houston Graphic Arts Assoc., Inc.
Houston Litho Club
Interstate Offset Products
Ladymon, Albert, Co.
Linotype Parts Co., Inc.
Mark Specialty Co.
Mendes, J. Curry, Corp.
Minnesota Mining & Mfg. Co.
New Era Mfg. Co.
North America Products Co.
nu Arc Co., Inc.
Palmer, E. C., & Co.
Robertson Photo-mechanix, Inc.
Scheinker, Ilya
Southwest Paper Co.
Southwestern Group, National Assoc. of Printing Ink Makers
Varigraph Co., The, Inc.
Wenzel, Lew & Co.

Demonstrates Fast TTS System

The first practical field demonstration of a new high speed Teletypesetter transmission system was held recently at the Boston *Herald-Traveler*. The system (announced in the August *Printing Equipmen Engineer*) was operated at 600 words per min., about ten times faster than present transmission speeds. According to M. T. Goetz, Vice Pres., Teletypesetter Corporation, speed of the final product could run considerably higher. William Baumrucker, jr., Business Mgr., Herald-Traveler Corp., reported that stock reports previously had been transmitted daily on an experimental basis since June 16 between New York and Boston.

The entire financial quotation sent to the *Herald-Traveler* over conventional circuits requires 12 hrs. of transmission time. The same material has been sent by the new high speed method in 62 min. ANPA Research Director C. M. Flint stated that rapid transmission of stock reports was only one use of the new system. Among those on hand for the demonstration was J. J. Ackell, Business Mgr., Wall Street *Journal*.

Sending equipment using a six-unit code consists of a 600 word per min. tape reader, a high speed electronic distributor and a converter which translates the signals for transmission over the special wire circuit. As tape passes through the reader, holes in the tape representing one complete character are translated into electrical impulses and fed simultaneously into the electronic distributor. The distributor changes the impulses it receives into a time-sequence code and sends the signals on to the converter for transmission.

Two tape gates can be provided on the reading unit of the sending set. One tape is held stationary and automatically starts to feed when the other tape has completely fed through its gate, thus avoiding the delay in threading fresh tape into the machine.

Receiving equipment consists of a demodulating converter, a receiving electronic distributor, and a control unit which feeds the incoming time-sequence code signals simultaneously to a high speed punch. To attain required speed, this 600 word per min. punch uses seven magnets which allow a complete character signal to be perforated in one operation.

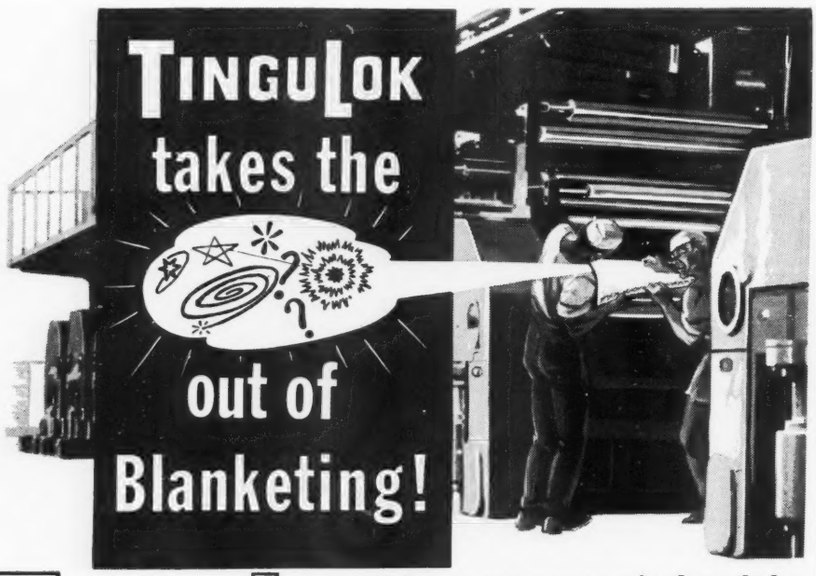
Tape prepared by the punch is then fed into Teletypesetter operating units mounted on the linecasting machines.

Offers Two Degrees

Degrees in Bachelor of Science and Associate in Applied Science are being offered at Rochester Institute of Technology beginning with the fall quarter which gets under way this month. RIT's Dept. of Printing and Dept. of Photography are included with other engineering departments in the two degree program of varying lengths.

As a part of this program, RIT will adopt a school year of three 12 week quarters, fall, winter and spring, with some cooperative students on a four quarter plan which will include summer sessions.

The new plan provides for the already established Associate in Applied Science degree to be the basic educational program for the first two or three years of



TINGULOK (PATENT PENDING) "the most economical and the simplest system of blanketing rotary presses"

The really "hot news off the press" is about TINGULOK:

1. Hands and fingers SAFE FROM INJURY in putting on blankets!
2. Blankets put on in less time!
3. Blankets more securely attached to impression cylinders!
4. Blankets do not shift or WALK from side to side.

TO INSTALL: TINGULOK uses two reels in blanket cylinder. Can also be adapted to one reel cylinders. The old canvas flaps, if any, are removed. The TINGULOK Lead Flap is applied to the lead or pin end roll. The TINGULOK Tail Flap is put on the other reel. It is not necessary to take reels out of the press to install TINGULOK Flaps.

TO BLANKET: Simply run clipper lace wire through elements on TINGULOK Lead Flap and TINGULOK Blankets and Drawsheet. Reel in until reinforcement on Drawsheet is below opening. Wrap blankets around cylinder and run wire through lacing on tail of Drawsheet. Reel in!

It's as simple as that...no pain, no strain, and no blankety blank in blanketing! TINGULOK Flaps and Blankets are made up complete...no preparation of Blankets and Drawsheets necessary!

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507 Bishop Street, N.W., Atlanta, Ga.....ATwood 3864
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723 E. Washington Blvd., Los Angeles, Cal.....PRospect 6023

study, the duration of which is determined by the scholastic requirements of the department in which the student is enrolled. The Bachelor of Science program is built directly on top of the AAS plan and requires one or two additional years of study, depending upon the student's major course of study.

Throughout both the AAS and BS programs, about 50 per cent of the credit hours carried by each student are devoted to general education courses in the fields of English communications, social sciences, humanities, mathematics and natural science. RIT will continue its policy of students taking courses in their major field of study from the first quarter of the freshman year.

Recent Equipment Reports

Letterpress Installations

Miehle Printing Press & Mfg. Co. letterpress equipment has been recently installed in the following plants: The Missionary Baptist Seminary of Little Rock, Ark.; Fuller Lapel & Box Co. of Pittsburgh, Pa. (No. 29 Letterpresses); Paper Service Co. of Holyoke, Mass.; Birmingham Publishing Co. of Birmingham, Ala., and the Ann Arbor Press, Inc., of Ann Arbor, Mich. (No. 41 Single Color Letterpresses); New York Life Insurance Co. of New York, N. Y. (No. 46 Single Color); Miller Publishing Co. of Minneapolis, Minn. (No. 46 Two Color); Vail Ballou Press, Inc., of Binghampton, N. Y. (No. 56 Single Color), and Blanchard Press, Inc., of New York, N. Y. (No. 56 Two Color).

Offset Proof Presses Installed

Consolidated International has announced installations of Consolidated Mailander offset proof presses at Louis F. Dow Co., St. Paul, Minn., and Rightmire-Berg Co., Chicago.

Heidelberg Sales — Heidelberg Western Sales Co., Los Angeles, announces one of its highest sales periods. Among firms recently installing Original Heidelbergs in California are Hom's Printing Service and Budde Publications of San Francisco; Orser & Lesson of Livermore; Belt Printing & Litho of Modesto; Redwood Coast Printers of Fort Bragg; Stationery Exchange, Art Printing Co., Bert Ayers and Loewen Press, all of Los Angeles; California Press of El Monte; Wayne C. Black of Glendale, San Clemente Printing Co. of San Clemente; Seagull Printing of San Diego; X-L Printers & Stationers of Long Beach, and Stephens Printing Co. of Burbank. Other presses were installed at Hall Poorbaugh Press and Foster Print Shop of Roswell, N. M.; Ward Anderson Printing Co. of Albuquerque, N. M.; Phillips Printing and Columbia Press of Denver, Colo.; *Sun Advocate* of Price, Utah; Alamosa Printing Co. of Alamosa, Colo.; The Acorn Press and Journal Star Publishing Co. of Lincoln, Nebr; *Nebraska Signal* of Geneva, Nebr.; Ross Printing Co. of Dawson, Nebr.; Laurence Press Co. and Service Press of Cedar Rapids, Ia.; Cascade Pioneer Advertiser of Cascade, Ia.; Schuster Printing Co. of Dubuque, Ia.; Parrott & Sons, Inc., of Waterloo, Ia.; Britt Printing and Comfort Printing of St. Louis, Mo.; Page Printing Co. of Lebanon, Mo.; Monte Parker of Independence, Mo.; Kansas City Composition Co. and Goldsberry-Stumpff, Inc., of Kansas City, Mo.; North Central Publication Co. of St. Paul, Minn.; Appleton (Minn.) *News;* Alexander H. Pfeiffer of Minneapolis, Minn.; Herald Publishing Co. of Hanska, Minn., and Sanders Printing Co. of Garretson, S. D.

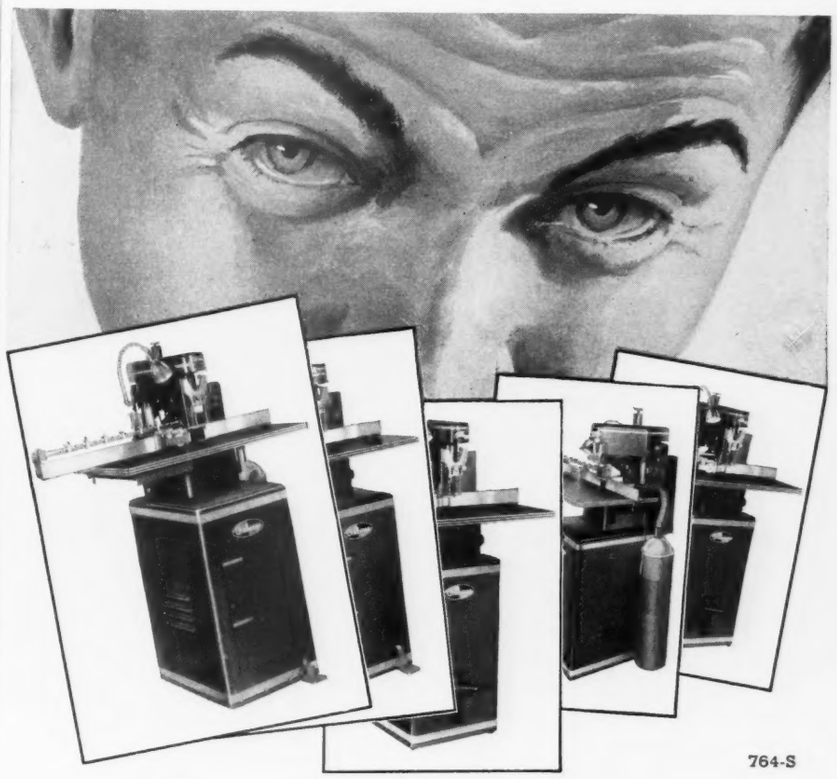
Equipment & Supplies

(Continued from Page 37)

corrections will hold up. (5) Emulsion used has been formulated to give widest latitude in exposure. (6) An advantage is the black image on development. The surface of the plate is whiter than zinc, more nearly approaching the color of paper, so that halftones can be seen on the plate as they will print. Halftones up to 220 line screen can be printed. Please mention PEE No. 264 when requesting further information.

Layout-Stripping-Lineup Table

The Bar-Plate Mfg. Co. has announced the Slimline 20 in. by 24 in. Layout-Stripping-Lineup Table. Knee and foot room when either in sitting or standing position is provided at the front of the table. A ¼ in. plate glass satin ground glass permits light diffusion. Sponsor states the fluorescent lighting system is



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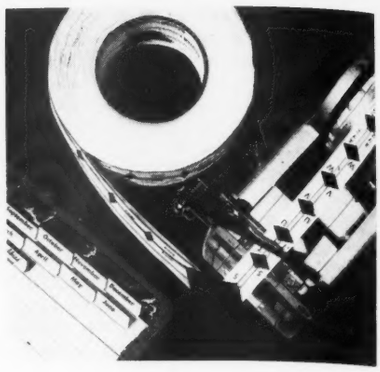
designed to keep the working surface cool and to eliminate glare, shadows and hot-

spots. The interior of the light box is finished in white enamel. The Slimline table is equipped with a horizontal stainless steel straightedge which may be moved into position either manually or by means of a vernier control. The vernier control is operable from either the right or left side of the table. The straightedge rides on stainless steel scales graduated in 1/32 in. located at each side of the table. More information is available by referring to PEE No. 261 in your request.

Transparent Indexing Tabs

Announcement of a transparent index tab supplied in roll form and already printed has been made by Superior Printing and Loose Leaf Co. To be known as Tabbies, the tabs may be used for indexing of ledgers, catalogs, sales manuals, directories, etc., either bound or loose leaf. Special copy required on



the tabs can be supplied by Superior. Standard headings are also available. Sponsor states Tabbies may be attached to any weight material including lightweight tissue. They also may be attached after a catalog or book is completed. The tabs are pressure sensitive. The overall transparency feature permits use on any page and over printed matter, according to the Superior firm. Sponsor claims the tabs last indefinitely without losing their transparency or causing indexed sheets to warp or wrinkle. The company further claims the tabs add no appreciable bulk to an indexed volume and provide added strength to the indexed page around the tab area. A special dispensing machine (shown at right in the illustration) is available for quantity use of Tabbies. Please request PEE No. 247 when writing for additional details.

Three Grades of Coated Papers

Three grades of coated papers for letterpress and offset printing to be known as Cico-Flex, Cico-Print and Cico-Duoset, have been announced by Champion-International Co. Swatch books, as shown in the accompanying illustration,

containing samples of the coated papers are being made available to printers, paper merchants, advertising managers and advertising agencies. Included in the swatch books are descriptions of the properties and uses of the papers, and a table of mill stock. Cico-Flex paper, a folding enamel, is designed for letterpress printing. Cico-Print, a conversion-coated sheet, is also for letterpress use. Cico-Duoset is a double coated offset enamel stock. Copies of the swatch books may be obtained by mentioning PEE No. 271 in your request.

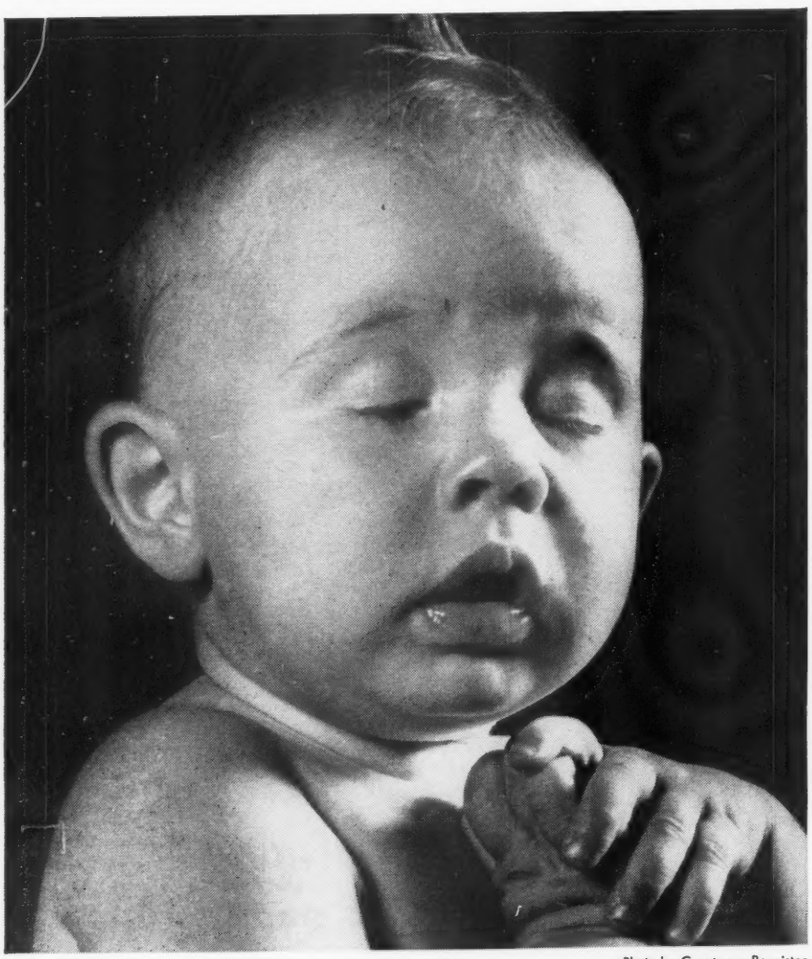


Photo by Constance Bannister

"Why... they wouldn't think of using anything but Burgess Mats!"

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Manufacturers and Distributors
of Burgess Chrome and Tone-Tex Mats

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A Laboratory Product
BURGESS
Chrome
MATS

Benny Statuettes for Winners — James J. Rudisill, President, Printing Industry of America, Inc., is holding a bronze statuette of Benjamin Franklin to be awarded winners in the 1954 PIA Printers' and Lithographers' Self-Advertising Exhibition. Contest closes October 22. Write Miller Printing Machinery Co., 1117 Reedsdale St., Pittsburgh 33, Pa., for details.

R. F. W. Tranter has joined the staff of Chas. T. Main, Inc., Consulting Engineers, Boston. Tranter will augment the services which Chas. T. Main, Inc. offers in the layout and design of printing and

R. F. W. Tranter is now associated with Chas. T. Main, Inc.

publishing plants of all kinds. Until recently, Tranter was Mechanical Superintendent of the Boston *Herald* and *Traveler*. He joined the *Herald-Traveler* in 1932 and since that time has been responsible for the design and installation of new equipment and rehabilitation of the various mechanical departments. Latest development was the mechanization of the mailing room. Formerly he was a mechanical engineer with R. Hoe & Co., Inc. He has been an active member of the American Newspaper Publishers' Association Mechanical Committee.

Jan van der Ploeg has been named Manager of Type Merchandising of American Type Founders, Inc. Associated with ATF since 1949, he will have charge of matters pertaining to type design. Steve L. Watts, former manager, has retired, but will continue as consultant for ATF. Watts will reside at Skyline Bend Farm, Front Royal, Va.

van der PLOEG

Changes at Fairchild—The appointment of Judson A. V. Hyatt as Director of Commercial Sales for Fairchild Camera and Instrument Corp. has been announced by Pres. John H. Clough. Former Graphic Arts Div. Sales Mgr., Hyatt now has charge of the Graphic Arts and Commercial Camera Divs. He came to Fairchild in 1952 in charge of market evaluation and was named Graphic Arts Sales Manager in 1953. Since World War II, when he

HYATT

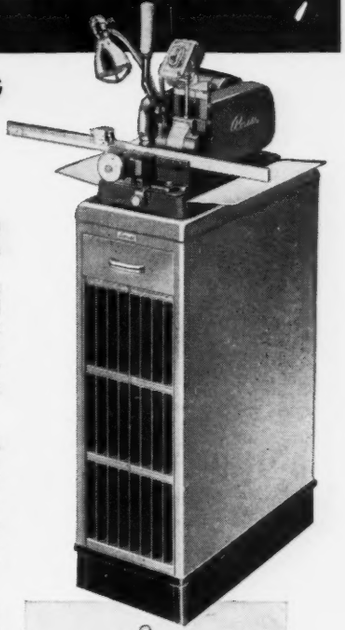
was a U. S. Navy photographic officer, Hyatt has been a field sales manager with the Ozalid Div., General Aniline & Film Corp., and New York sales manager with the Flofilm Div., Diebold, Inc. Replacing Hyatt as Graphic Arts Div. Sales Mgr. is Edward P. Tracht, who joined Fairchild's Customer Engineering Dept. in 1949 to take charge of Scan-A-Graver service in the Philadelphia area. He later was named service supervisor for the midwest, and became assistant sales manager in 1952. Tracht served in the old Army Air Corps from 1932 to 1934. He rejoined the service in 1942, and was a B-24 engineer, top turret gunner and instructor engineer. Tracht was educated in Philadelphia and at the University of Pennsylvania.

DO THE WORK OF HOURS *in Minutes!*

SLASH YOUR PRINTING COSTS WITH THE

Rouse

POWER MITERER



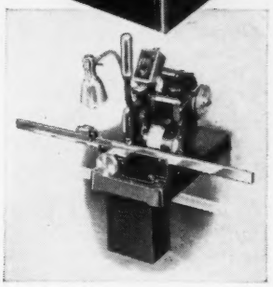
If you need miters in either small or large quantities, no other machine nor method can turn out anywhere near as many perfect joining miters so quickly from strip material. That's how the Rouse Power Miterer can slash your printing costs by doing work in minutes that now takes you hours.

A Rouse Power Miterer won't cost you one cent! Printers the world over say that money paid for a Rouse Power Miterer quickly comes back through tremendous savings in expensive time. After getting your money back, you'll start collecting daily dividends from permanently lower operating costs.

FROM THE SMALLEST JOB SHOP UP TO THE LARGEST PLANT, ONLY ROUSE MAKES A POWER MITERER FOR EVERY TYPE OF USE.

You may buy any Rouse Power Miterer as a bench model or with any other equipment you wish.

Virtually every printing plant in the world uses one or more Rouse products.



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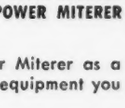
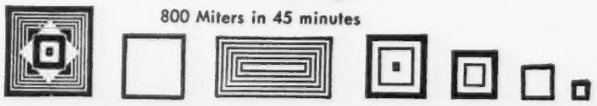


800 Miters in 45 minutes



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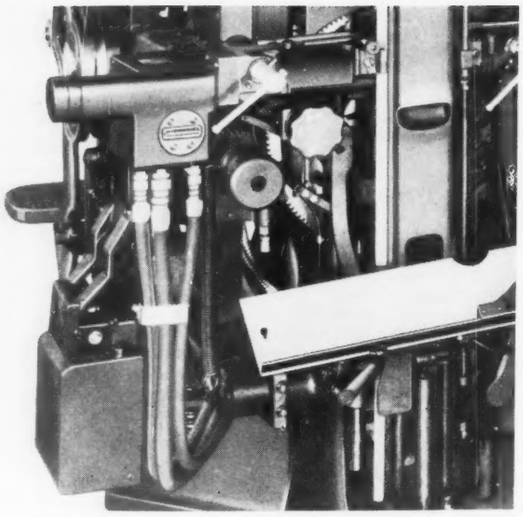
SLUG CLIPPERS
BAND SAWS

The Hydraquadder Hydraulic Quadder has been developed by Mergenthaler Linotype Co., it was announced recently by J. W. Reid, Vice Pres. in Charge of Sales. It will be available for both manual and tape-operated Linotypes. The following claims are made for the Hydraquadder: (1) Accuracy of centering and margin; (2) Smooth, sure, gentle vise jaw action by hydraulic pressure that prevents jaw slap; (3) Uniform vise jaw pressure regardless of line length or quadding function; (4) Automatic wipe action to keep jaws free of metal accumulation, (5) No adjustments or maintenance. The hydraulic principle of constantly circulating hydraulic fluid is used in the Hydraquadder design. Proper pressure for trouble-free quadding, it is said, is predetermined and is maintained by a pump operating from the Linotype's main drive. It is also stated that timing is controlled by the cam shaft, to make the Hydraquadder's functions independent of line length or machine speed. Operation of the Hydraquadder is governed by one control at the left of the first elevator slide. The operator turns it to any one of four positions: Quad left, center, quad right, or regular operation. Hydraquadders may be specified for installation on new machines at the factory or for application to Linotypes now in use. Further information may be secured by mentioning PEE No. 242.



Web Offset Research

At the Web Offset Meeting recently in Chicago, a need for further research by suppliers was resolved. A committee will work with press suppliers to solve Web Offset problems. Also, the printers plan to appoint a committee to work with the PIA Trade Relations Committee to solve linting and other paper problems.

Rotofilm

(**Continued from Page 41**)

ing which reduces the human element error.

(2.) Provides consistent sensitization.

(3.) Permits determination of etching time by means of a densitometer.

(4.) Dimensional stability of the resist is great.

(5.) Reduces cost for color printing.

(6.) Allows shops to schedule work more advantageously because of its keeping property.

(7.) Can be easily and inexpensively shipped by mail in a paperboard tube.

May Be Used in Several Processes

Rotofilm may be used in conventional gravure, Devers, the Dultgen process, or in the newly developed Alco process developed by Dr. Kott and patented by Publication Corporation. In the Alco process, a greater degree of quality control can be attained but the equipment is quite complicated and expensive.

When used for color printing with the Alco process, Rotofilm permits the usual number of glass-plate positives to be cut in half, allowing a substantial savings in the cost of gravure color.

Rotofilm replaces a similar but less versatile product introduced by du Pont about four years ago.

From the initial work of Karl Klic around the turn of the century to the present time, dichromated gelatin as the etching resist in the commercial preparation of gravure printing members has been employed, except as in the Henderson-ATF process, Huebner, Bekk-Kaulen process (Beka-Gravure process) and still another coating process developed by Wurttembergische Gattunmanufactur. The last two processes are German and they both have a final dot formation of variable depth as well as variable size, while the ATF and Huebner processes only produces dots of variable size.

A New Approach

Here we will discuss a new approach, namely, the preparation of an etching resist employing the special Rotofilm photographic film of the silver halide type.

The basic principles of etching copper cylinders through a tanned gelatin resist remain unaltered when Rotofilm is used. However, the procedures and photochemical reactions involved in preparing the resist are radically different from those using a dichromate sensitized material. It is the purpose of this discussion to describe this new product, how it works and how it is being used.

Preparing Cylinder By Conventional Method

As a basis for comparison let us review briefly the steps involved in preparing a conventional gravure cylinder in a typical gravure shop. First, the pigmented gelatin or carbon tissue layer coated on paper is sensitized by immersion in a bath of ammonium or potassium dichromate. It is then permitted to dry on a ferrotype plate. The tissue is then exposed in a vacuum frame by arc lamps for several minutes through a gravure screen and then through a continuous tone positive. A photochemical reaction during exposure tans or hardens the gelatin layer, the thinness of the tanned layer being proportional to the exposure received. After exposure the tissue is adhered to the copper cylinder with a thin film of distilled or demineralized water and pressure from a rubber roller. Next the paper backing is removed in a hot water bath which also washes off the unexposed untanned gelatin. After protecting the uncovered areas of the cylinder with asphaltum, ferric chloride solutions are applied to etch away the copper through the resist and form an intaglio design of the tone image. The depth of the etched cells then determines the amount of ink which is transferred to the paper during the printing operation. This summary greatly over-simplifies many steps of the process, but as we are familiar with this process, all the details and troubles have been eliminated here.

Fabrication of Rotofilm

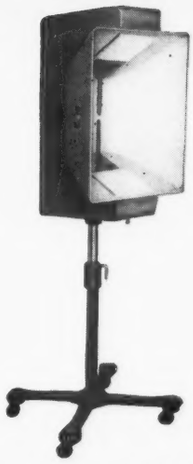
Now let us turn to Rotofilm. The product structure of Rotofilm is somewhat more complex than carbon tissue. On one side of 5 mil cellulose acetate base are coated successively (1) Stripping layer, (2) Cellulose nitrate layer, and (3) Silver halide emulsion sensitized to respond to both blue and green illumination. On the opposite side of the acetate support is coated a gelatin layer containing a red antihalation dye. This structure is typical of stripping films commonly employed in the Graphic Arts. The role of the various layers will become apparent as we describe the use of Rotofilm in preparing an etched cylinder.

Unlike carbon tissue, Rotofilm is presensitized by the manufacturer. Rotofilm shelf life is fairly long. Furthermore, the photographic speed is many, many times greater than carbon tissue. This simplifies the exposure, but likewise requires handling the film under red safelights in much the same manner as lithographic films.

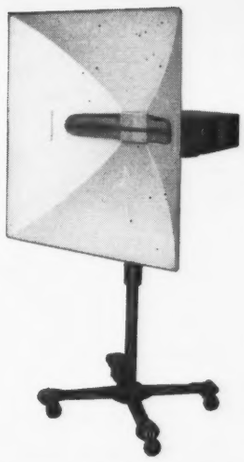
Because of the speed of Rotofilm, arc lamps are replaced by low wattage tungsten illumination. This is very important and certainly simplifies the whole set up.

Exposing Rotofilm

When using Rotofilm for conventional gravure, the following steps are involved. The film is exposed with tungsten illumination supplied by a two-compartment unit with a 75 w. lamp screened with a yellow Corning No. 3385 filter in one side; a 150 w. lamp and an ultra-violet Corning No. 5840 filter in the other side. The exposures can be made automatically by a *time-and voltage-controlled circuit*. This is very important as already discussed under color temperature for each of three exposures which makes the entire procedure a simple push-button operation.



B-1C CONSTANTARC. Completely and constantly automatic. Produces a steady light of tremendous intensity which brings out tiny details in the darkest portions of copy . . . which cuts down expensive camera operating time. The Constantarc automatically compensates for power fluctuations, drafts and carbon impurities. Can be furnished with any of the standard Macbeth mountings. No other lamp on the market offers all the advantages of a Macbeth Constantarc!



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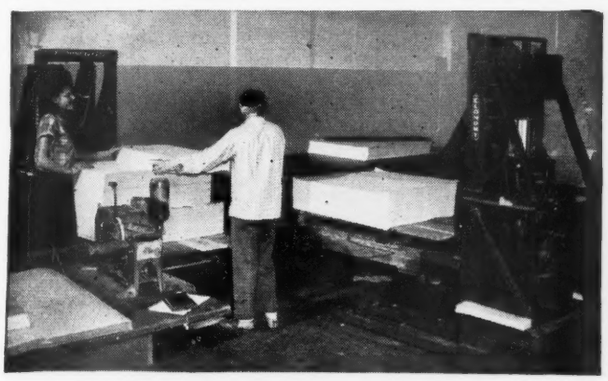

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Write for complete specifications of this paper handling lifter. Our engineers can help with your particular problems.

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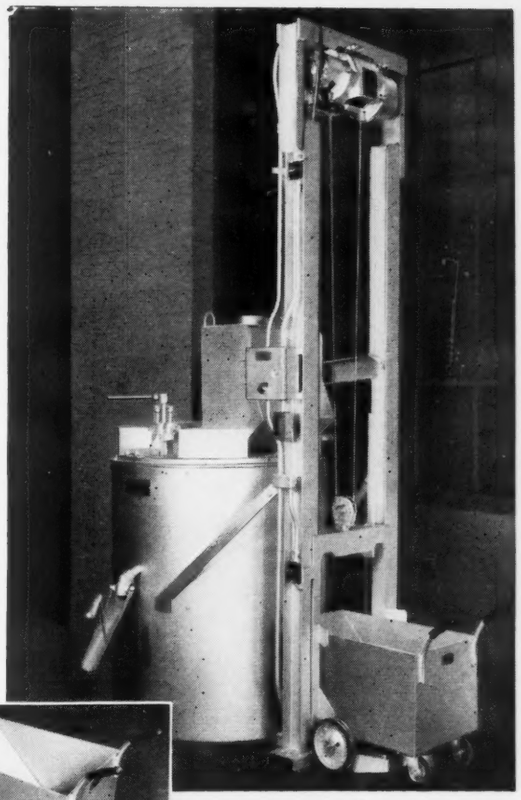

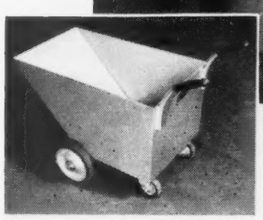

Cart becomes part of loader; eliminates all hand loading and transfer of remelt type.

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Now you can remelt linotype scrap quickly and easily — with this new Kemp team! For one thing, you can wave goodbye to heavy hand loading! The Kemp Metal Loader is automatic . . . sturdily built along simple lines for long, trouble-free performance with a minimum of maintenance. Smooth operation of cart and hoist makes handling of scrap an easy job. Also, the Kemp Immersion Remelt Pot gives you quick heating with accurate temperature control, eliminates pot cracking and inefficient heat application. The unique Kemp construction results in less dross formation . . . does away with obnoxious dumping fumes.

Put the two together and you have a team that really speeds up scrap recovery . . . eliminates hand loading! See for yourself! For information on the Kemp Immersion Remelt Pot and Kemp Metal Loader, write today to: THE C. M. KEMP MFG. CO., 405 E. Oliver St., Baltimore 2, Maryland.

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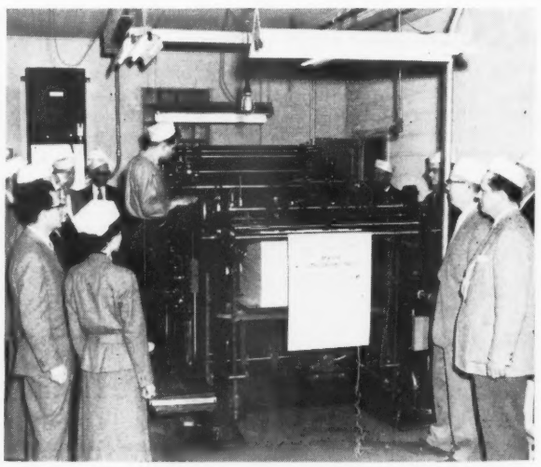
The first prefogging exposure of 7 sec. to the UV light produces a low overall density which overcomes the photographic inertia of the emulsion and allows the most subtle tones to be recorded. The screen is then placed in contact with the emulsion of the Rotofilm in a vacuum frame for a 2 sec. exposure to yellow light which forms the uniform screen pattern upon development. The screen is removed and the tone positive is then exposed for approx. 45 sec. to the UV source. This last exposure of the tone image ultimately determines the depth of the etched cells.

The purpose of the two colors of exposing lights can be understood when the response of the film is examined. A spectrogram of Rotofilm shows its sensitivity extends from the deep blue into the green region of the spectrum. A sensitometric plot of exposure versus the resulting densities obtained for each color of printing light shows that with the yellow light the highest contrast is obtained. This provides a sharp screen pattern which produces cell walls with maximum strength without distortion. The exposure with the ultraviolet light produces a lower contrast which allows maximum control over the density during the prefogging exposure and permits proper recording of the complete scale of the tone positive.

Processing Steps

Returning to the film which has been exposed, we are now ready for processing. No physical change has taken place in the emulsion layer of the film up to this point. However, upon photographic development in a special tanning developer the latent image is transformed into a silver image which is accompanied by the tanning of the gelatin around each deposited silver grain. The actual processing operation is very similar to that followed in developing, fixing and washing any photographic negative material. The processing solutions may be handled in trays or in deep tanks. For the case where trays are used in a typical photographic darkroom, a total of four trays is required—two for the "splittype" developer, one for the fixer and one for washing. The film is first soaked for two minutes in the so-called *A* developer which contains the developing agents and preservatives. No developing action takes place here as the film merely absorbs the developing agents. The film is removed drained for 30 sec. and then transferred to the *B* developer which contains the activator. The silver image appears rapidly in this solution but 2 min. are required for full development and tanning. The film is then rinsed in a tray of water for 30 sec. and then fixed in a tray of hypo for 3 min. This is followed by a 20 min. wash in running water to remove all traces of residual hypo. The film is then hung up to dry in a clean area with an air temperature around 85 deg. F.

For routine operation, tank development is recommended. Here X-ray type



ATF Press in Grand Rapids—Lars Gilson, Pres., Gilson Press, Grand Rapids, Mich., recently celebrated purchase of an ATF-Mann L-135 offset press by holding open house for his customers and supplymen. The press is equipped for speed up to 6,000 copies per hr.; sheet size up to 23 in. by 36 in. Gilson also has an ATF-Little Giant cylinder job press Model 5, and an ATF-Kelly. Pictured are some of the approx. 100 persons who attended the open house. Gilson stands slightly in front of ATF Representative Tom Dobbertin (extreme right).

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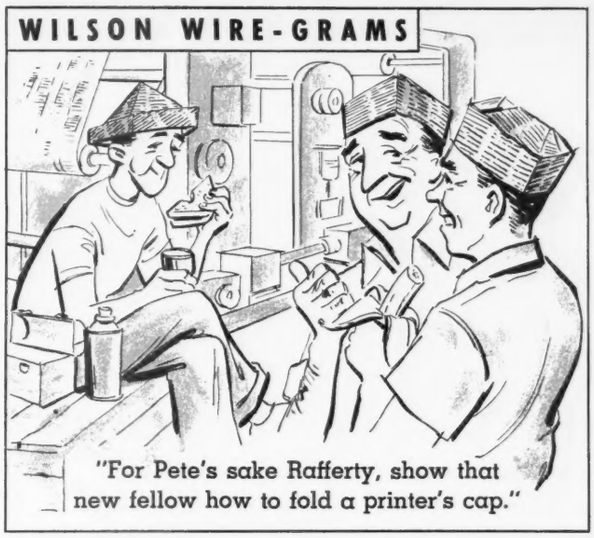

"For Pete's sake Rafferty, show that new fellow how to fold a printer's cap."

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The other day a plant in Lawton, Oklahoma, called at 3:15 P.M. saying they were out of our stitching wire. One hour later the wire left our plant for the airport.

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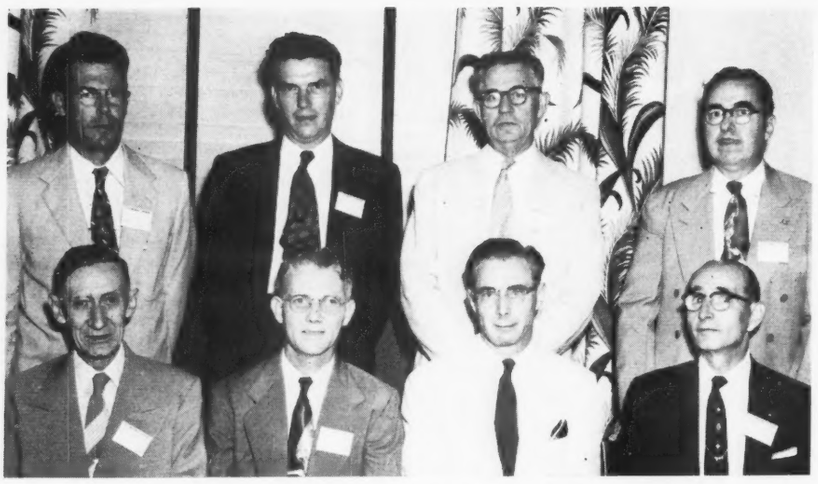

Executive Committee Personnel for 1954 SNPA Eastern Div. Mechanical Conference—The conference was held at Whitley Hotel, Montgomery, Ala., August 22, 23 and 24.

Left to right: Front row, Earl Dennington, Machinist, Atlanta (Ga.) Newspapers, Inc.; M. M. Hussey, Mailing Foreman, Tampa (Fla.) *Tribune;* Earl P. Boyd, Composing Foreman, Montgomery (Ala.) *Advertiser-Journal;* Boyce Brogdon, Supt., Knoxville (Tenn.) *News-Sentinel.*

Back row, left to right: Earl A. Hutto, Pressroom Foreman, Fort Myers (Fla.) *News-Press;* Cliff Wilkinson, Foreman, Huntsville (Ala.) *Times;* C. L. (Roy) Ray, Chairman of the Committee and also Mechanical Supt., Winston-Salem (N. C.) *Journal* and *Sentinel;* James Dorris, Engraving Foreman, Knoxville (Tenn.) *News-Sentinel.*

Committee members not present when picture was taken are: Roy Vickery, Stereo Foreman, Atlanta (Ga.) Newspapers, Inc., and C. T. Cargile, Composing Foreman, Murfreesboro (Tenn.) Daily *News-Journal.*

New members of the Executive Committee are: George Downes, Chief Machinist, New Orleans (La.) *Times-Picayune* and *States;* Fred L. Morris, Machinist, Kingsport (Tenn.) *Times-News;* A. C. Smith, Stereo Foreman, Charlotte (N. C.) *News;* E. C. Morrison, Pressroom Supt., Jacksonville (Fla.) *Times-Union;* Homer E. Terry, Stereo Foreman, Times-World Corp., Roanoke, Va.

At the organization meeting of the new Executive Committee, Boyce Brogdon was chosen Chairman; Earl P. Boyd is Vice Chairman, and SNPA's Ray B. Crow is secretary.

Retiring members of the Committee are: Roy Vickery, Earl A. Hutto and C. T. Cargile.

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film hangers can be used for better protection of the film surfaces against scratches caused during handling while wet. After the film is dried it is relatively scratch resistant. Fingerprints and other sources of grease should be avoided or adhesion to the copper cylinder may be impaired.

Laydown Technique

The laydown technique is the same as practiced with carbon tissue. The films are mounted in the laydown machine to give proper registration when adhered to the cylinder with a thin film of water and pressure from the laydown roller. As soon as a row of films is laid, the acetate base is removed from each sheet by lifting a corner and stripping it off the cylinder dry. If this is not done, any excess water which adheres to the gelatin back-coating would cause it (the back-coating) to stick to the laydown roller when the cylinder is backed up to accept the next row of films. Under the acetate base is a tough water-resistant membrane of cellulose nitrate which protects the resist during subsequent laydowns. After all films are laid, this thin nitrate membrane is removed by a solvent, consisting of one part each of Isopropyl Alcohol and Diacetone Alcohol. A dry-stripping procedure is also possible but only the solvent method will be treated here. The solvent is placed in a tray (usually inserted in the hot water development stand) and the cylinder is revolved slowly in the solution for a few minutes until the membrane is dissolved. Any residual membrane is removed by wiping the cylinder with a wad of cotton saturated with the solvent. Without allowing the cylinder to dry, it is immersed in hot water at 120 deg. F. to remove the unexposed and untanned gelatin much the same as for carbon tissue. This step takes 10-20 min. depending on the pH of the washoff water. After the soft gelatin is removed completely the water temperature is lowered *slowly* to room temperature to cool the cylinder. After cooling, the cylinder is flooded with methanol to dry the resists. Next, the cylinder is staged with asphaltum over the non-printing areas after which it is ready for etching.

Etching the Cylinder

The etching of Rotofilm resists differs but slightly from the etching of those prepared with carbon tissue. It has been found that only three "irons" are necessary for etching Rotofilm resists. These generally are 44 deg., 42 deg., and 40 deg. Baume', but will vary according to manufacturer. Because Rotofilm resists contain a silver image, etching is not as easily observed as with carbon tissue. However, experience will teach the proper technique after a few test cylinders have been made. As soon as etching is completed, the cylinder is flooded with hot water and the etched portions of the resists wiped off. After the staging, asphaltum is removed with a hydrocarbon solvent. Acetic acid is applied in the usual manner to remove the balance of the resists. These protected areas of Rotofilm resists are somewhat more stubborn to remove from the cylinder than carbon tissue. No salt should be used with the acetic acid and immediate removal of the resists after etching is recommended. This completes the preparation of the cylinder which is now ready for proofing.

You have noted the steps where Rotofilm and carbon tissue are used in the same manner and there have been others where new ideas and techniques are involved. Perhaps the most notable differences (in addition to the presensitized emulsion of Rotofilm) are: (1) Provision for examining the processed films for errors in exposure or development, and (2) Ability to hold the processed films for laydown at a later time.

The developed and dried film looks very much like any other photographic negative. Since the density of the silver image is proportional to the thickness of the tanned gelatin, it is possible to control the etching of the resist by maintaining the photographic densities of the highlights and shadows within a specified range. By this means it is possible to obtain improved uniformity and better control of the etching process. Being able to measure the film before laydown, costly errors can be avoided which presently may not be recognized until a cylinder has been etched.

The ability to hold a processed film for an indefinite period before laydown introduces several attractive features. First of all, it facilitates scheduling of shop work and smooths out variable work demands. Furthermore, it permits films to be prepared in one plant and shipped conveniently, in a mailing tube for example, to any number of locations for use at any later time. This greatly reduces shipping costs as compared to glass plates.

This discussion has covered some of the physical and photographic properties of Rotofilm and an example of how it can be used in the conventional Devers and Dultgen Gravure processes. The principal use for Rotofilm to date has been with the Alco process.

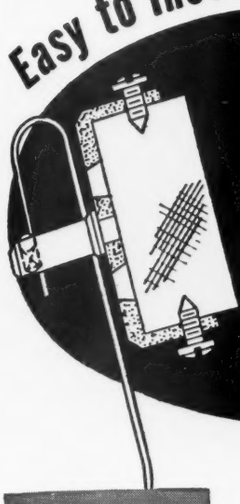
Exposing and Processing

Before closing, we think that expanding on Exposing and Processing of du Pont Rotofilm would be of interest:

Du Pont Rotofilm is so designed that variations in contrast may be obtained by control of the color of the exposing light. Exposures made with yellow light result in high contrast. Exposures made

Easy to Install—Use—and Service

STAR'S improved BACK MOLD WIPER



When it comes to delivering dependable service and long life, rugged Star Back Mold Wipers are in a class by themselves.

Spring tempered steel body attaches securely to base by 2 U clamps. A simple pull forward instantly releases cup and wiper for felt treatment or replacement. Four convenient holes in back of cup make lubrication quick and easy. Standard solid felts are secured by set screws, but tape rolled felts are available on specification. It will pay you to investigate the advantages of Star Back Mold Wipers on your composing machines.

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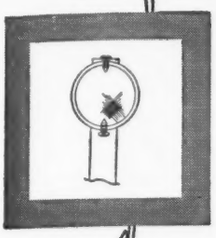
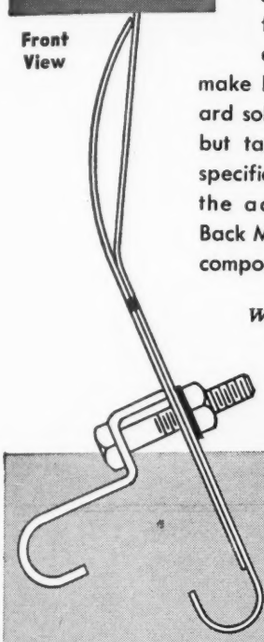


Front View



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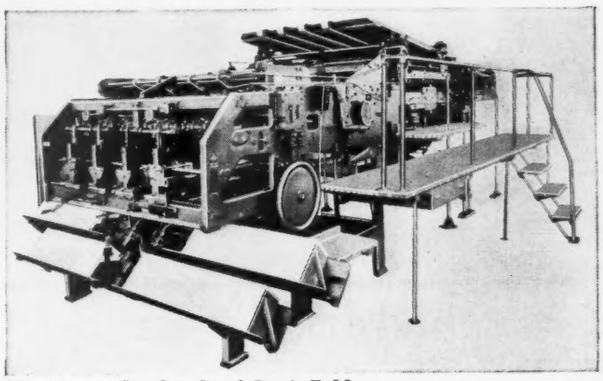
Folds as many signatures hourly as two model "N" Quads . . . . with 33% saving in floor space



The Dexter Duplex Quad Book Folder

Basically a Model "N" Quad folder, this machine has an additional cross feeder and delivers *two* sheets on separate conveyors simultaneously to position at first fold, one above the other and individually registered both side and front.

Signature sizes: 4⅛ x 6¼" to 7¼ x 10½".
Flat size sheets: 25 x 33" to 42 x 58".

The sheets are folded and delivered into packer boxes as on the "N" Quad, but the *Duplex* Quad delivers four 32 page signatures with *closed* heads, whereas the Model "N" produces two 32's composed of inserted 16's.

The Duplex Quad may be furnished as a complete new unit—or a Duplex attachment can be supplied for any Model "N" Quad already installed.

The Duplex Quad folds approximately as many signatures per hour as two Model "N" Quads, with a saving of about one third of the floor space required by two Model "N" Quads. Also the 32 page signatures with closed heads delivered by the Duplex Quad facilitate subsequent bundling, gathering, sewing and stitching operations.

Further information and data showing the economical application of this folder to your production will be furnished on request.

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with ultra violet light result in low contrast.

Screen or halftone exposures should be made with yellow light for high contrast screen images.

Continuous tones should be exposed with ultra violet light to provide the low contrast required for good reproduction of gravure positives. Recommended continuous tone positive densities are: 0.40 to 1.60.

Several exposing light sources are available. For the yellow light a Corning No. 3385 glass filter over an incandescent light bulb provides the most accurate source. A yellow insect repellent type bulb also is a good source for screen or halftone exposures. For the ultra violet source a Corning No. 5840 or Wratten No. 18A filter are the most dependable for long term use.

Approx. Screen Exposure Times

Corning No. 3385 yellow filter over a 25 w. inside frosted incandescent bulb enclosed in a tube with a three inch square aperture with the filter mounted one inch from end of the bulb, and placed 6 ft. from the printing frame.

Conventional screen, 150 line, 10 sec. Density of resist should read 2.80.

Invert halftone, 150 line, 10 sec. Density of resist should read 2.80.

Invert halftone, 150 line, 8 sec. Density of resist should read 2.70.

Using a 25 w. yellow bulb of the insect repellent type, the exposures are approx. the same as listed above.

Approx. Continuous Tone Exposure Times

Corning No. 5840 over a 75 w. photo enlarger bulb enxlosed and mounted as described for the yellow filter.

Positive densities 0.40 to 1.60. Exposure time approx. 45 sec. Density of resist should read 0.20 for the positive density of 1.60 and 1.50 for the positive density of 0.40. Backgrounds (clear glass on positive) should read above 2.00.

Devers-Kable type of positive should be exposed with a white light, using a 15 w. inside frosted bulb at 6 ft. Exposure time is approx 6 sec. Density of resist should read 2.80.

Line exposures such as type, label, etc., should be approx. the same as for conventional screen exposures plus an allowance for glass or film densities. Resist density (not including screened area) should read 2.80 to 2.90.

Development is accomplished in a split developer. The first part (called *A* developer) contains only the developing agents and preservatives. The second part (called *B* developer) contains only the activator chemical. The developer is used in two parts to prolong the life of the developer and to permit proper replenishment for deep tank use.

Developing

Two minutes in *A*.

Drain 15 sec. to remove excess developer.

Two minutes in *B*.

Wash for 1 min.

Three minutes in hypoboric acid fixing bath.

Wash until free of hypo.

Dry in moving air at temperature not above 85 deg. F.

After the film has been dried it may be laid to they cylinder in the conventional manner employed with carbon tissue.

Following laydown the acetate temporary base support should be dry stripped from the film.

Under the acetate base and over the emulsion as a waterproof protective layer is a cellulose nitrate membrane. This should be removed with a solvent mixture of 1 part Diacetone Alcohol and 1 part Isopropyl Alcohol and 5% water. Pour the solvent over the membrane and allow to remain for 2 to 3 min., then squeegee off the softened membrane. This procedure should be repeated to insure complete removal of the membrane.

Hot water development and alcohol drying follow the same technique employed with carbon tissue.

Etching of Type or Line Work

Open in a 39 deg. Baume' iron perchloride. Opening time approx. 30 sec. Etch in a 42 deg. acid for approx. 20 min.

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1—Davidson, Model 816, 10x14 850
3—A.T.F. Offset Webendorfer Chiefs, 17x22 complete with motors ..... ea. 4000
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2—Model 325G Vandercook power driven proof presses, power tape delivery Size 24x47 Refinished ..... ea. 2000
1—Vandercook, Model 2, size 20x28 400
1—Vandercook, Model 20, 12x23 self-inking 275
1—Vandercook, Model 32, self-inking, 15x28 375
1—Potter No. 2 Gripper Proof Press, self-inking, feed table, side guide, 17x25 600
1—50"1OZ Seybold Automatic clamp paper cutter 3850
1—Dayton Seybold 36" automatic clamp paper cutter, rebuilt 1900
2—National full automatic 32" Paper Cutters, refinished 900
1—Perfecta 51" Paper Cutter, power back gauge, automatic spacer, automatic clamp 2000
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1—Model H Intertype Serial No. 12269, 3 magazines, electric pot, Mohr saw, blower 2850
1—Model H Intertype Serial 12270, 3 magazines, quadder, Mohr saw, electric pot, blower 3200
1—Model B-2 Intertype, Serial No. 9051, electric pot 3000
1—G2 Intertype, Serial No. 13221, late style electric pot, with Mohr saw combination 72-90 Mixer 3950
1—Model 8 Linotype, Serial No. 41388, 3 main magazines, electric pot, rebuilt 3750
1—Model 8 Linotype, 46,438 Serial No., with gas or electric pots, in good operating condition 3350
2—Chemco 24" Automatic Cameras with Carl Zeiss Lenses ..... ea. 1400
3—A3 Trim-O-Saw, with router and jigs, 28x28 table 375
1—Sheridan 4-A Embossing Press, 15x20, with 3-draw Peerless gold leaf attachment, electric head, sliding bed 2750
1—Sheridan Arch Embosser, 14x15, 3-draw gold leaf attachment, electric head, thermostat 1400
1—Standard No. 9, 14x20, with 3-draw gold leaf attachment and printing ink attachment, feeder, 4 poster (send for circular) 3200
1—Cleveland Model, 19x25, Folder with suction power feeder, rebuilt 1800
1—Cleveland Model B, 26x40, Folder with continuous feeder, in good operating condition 1000
1—Boston, Model 17, Wire Stitcher, with 6 heads 775
1—No. 7 Boston Wire Stitcher CAP. 7⅝" 375
3—Rosback 30" Rotary Pin Hole Perforator, equipped with 4 heads 950
1—Rosback 36" Rotary Perforator, equipped with 8 heads, with automatic feeder 1500
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1—Rouse No. 1 Band Saw 275
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1—Hoe No. 5 Stereotype Shaver Worm Feed 19x28 375
1—Form-O-Scorcher, Model S.C 200
1—W Lloyd Rotary Head Planer 17x25 250
1—Lloyds Plate Edge Trimmer 23x23 175
1—Royle Electric Beveler 300
1—Nicco Raised Printing Machine, blower, exhaust, power driven 350
1—Large Size Mullen Paper Tester 175
1—Koehler Two Color Bag Imprinting Machine 1200
1—Ditto Power Machine, like new 200
1—Morrison Double Head Carton Stitcher 350
1—Morrison Carton Stitcher Model 32 L.G 300
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Etching of Conventional Gravure

Open with a 45 deg. acid. Opening time, 2 min. Etch for 5 min. in the 45 deg. acid, 5 min. in 43 deg. and close out (approx. 8 min.) in a 41 deg. acid.

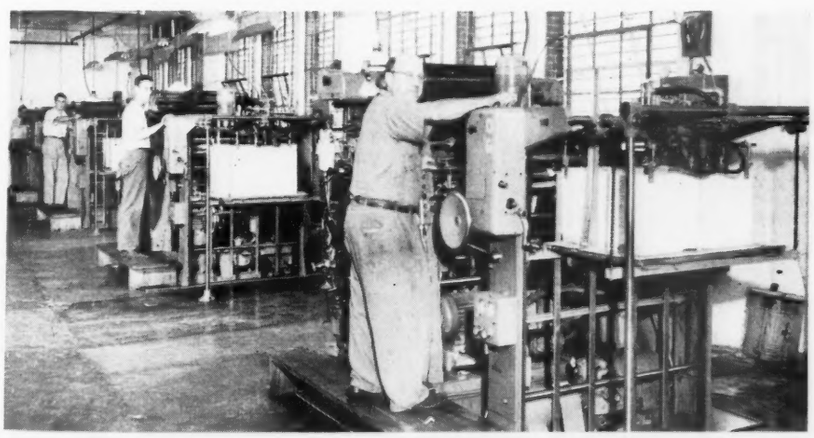
Invert Halftone

Use the same etching procedure as for line work.

Dultgen Process

Use same etching procedure as for conventional gravure. After etching has been stopped with water, the resist should be removed in the same manner as employed with carbon tissue. Do not use salt in the acetic acid as used with carbon tissue. Salt will silver plate copper.

Rotofilm is tougher than carbon tissue. Should difficulty be experienced in removing the resist, flood it with acetic acid and then sprinkle bicarbonate of soda over it. This will loosen the resist at once and removal becomes easy.



Adds Six Miehle Presses—The Gibson Art Co., Cincinnati, O., has added six Miehle offset presses to its printing department within the past year. Besides the four Miehle No. 29 offset presses shown above, Gibson recently installed a Miehle No. 41 Two-Color offset press and another Miehle No. 29 offset press. It is reported the company operates the four No. 29 presses 18 to 24 hrs. per day at running speeds of 5500 to 6000 per hr.

Conference Dates

(With Organization Names and Principal Officers)

American Photoengravers Assoc. — 1954 Conf., Hotel Jefferson, St. Louis, Mo., Oct. 11, 12, 13. Pres., D. H. Murnik, Oakland National Engraving & Gravure Co., 307 Tenth St., Oakland 7, Calif.; Exec. Secy., Frank J. Schreiber, 166 W. Van Buren St., Rm. 430-A, Chicago 4, Ill.

ANPA Mechanical Conf. — 1955 Conf., Edgewater Beach Hotel, Chicago, June 6, 7, 8. Chairman of the Committee, Joseph E. McMullen, Prod. Mgr., Milwaukee (Wis.) *Journal;* Mgr., ANPA Mechanical Dept., Richard E. Lewis, 370 Lexington Ave., New York 17, N. Y.

Book Manufacturers' Institute — 1954 Conv., Hotel Hershey, Hershey, Pa., Oct. 18, 19, 20. Pres. Sidney Satenstein, American Book-Stratford Press, Inc., 75 Varick St., New York 13, N. Y.; Secy., Miss A. G. Watson, 25 W. 43rd St., New York 36, N. Y.

Fifth District Craftsmen's Conf. — 1955 Conf., Netherland-Plaza Hotel, Cincinnati, Aug. 6. Pres., Howard Keefe, Sales Representative, Cincinnati Lithographing Co., 4318 Duneden Ave., Cincinnati 36; Secy.-Treas., Dave Walker, Adm. Asst.,

Graphic Arts Assoc. of Michigan, 320 W. Lafayette St., Detroit 26.

Graphic Arts Trade Assoc. Executives – 1954 Meeting, Hotel Statler, Detroit, Nov. 13, 14. Pres., Richard A. Stout, Printing Industry of Atlanta, Inc., 881 Piedmont Ave., N.E., Atlanta, Ga.; Secy., Arthur L. Johnson, Graphic Arts Assoc. of Milwaukee, 704 W. Wisconsin Ave., Milwaukee 3, Wisc.

Gravure Technical Assoc.—1955 Annual Meeting, Drake Hotel, Chicago, Ill., Feb. 2, 3, 4. Pres. John E. Hazel, New York *Daily News,* 700 Pacific St., Brooklyn 17; Secy.-Treas., Frank Sportelli, International Color Gravure, Inc., 39 W. 60th St., New York 23, N. Y.; Secy., Edward S. St. John, 30 Rockefeller Plaza, New York 20, N. Y.

Great Lakes Newspaper Mechanical Conf. — 1955 Conf., Sheraton-Cadillac Hotel, Detroit, Mich., Jan. 16, 17, 18. Pres., Frank Dassori, Pressroom Supt., Detroit *Times;* Secy.-Treas., Don Clark, Stereotype Supt., Grand Rapids (Mich.) *Press.*

Illinois Newspaper Mechanical Conf. – 1954 meeting, Hotel Custer, Sept. 25-26, Galesburg, Ill. Pres. Eldon L. Martin, Galesburg (Ill.) *Register-Mail;* Secy.-Treas., Wilbur L. Augspurger, Peoria Journal-Star, Inc., 119 So. Madison St., Peoria 2, Ill. Chairman Supplymen's Committee, Joseph D. Goggin, Newspaper Publishers Supply Co., 1639 N. Lorel Ave., Chicago 39.

Intl. Assoc. Electrotypers & Stereotypers – 1954 Conf., Greenbrier Hotel, White Sulphur Springs, W. Va., Oct. 28-Nov. 1. Pres., Carl N. Becker, Becker Electrotype Co., 144 N. Water St., Milwaukee 2, Wis.; Exec. Secy., A. P. Schloegel, 701 Leader Bldg., Cleveland 14.

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You can bring the benefits of this program into your plant by becoming a member of the Education Council of the Graphic Arts Industry. Membership dues are a minimum of $100 a year.

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OF THE GRAPHIC ARTS INDUSTRY, INC.
719 FIFTEENTH ST., N.W. WASHINGTON 5, D.C.

Intl. Assoc. of Printing House Craftsmen 1955 Conv., Netherland-Plaza Hotel, Cincinnati, O., Aug. 7-10. Pres., Thomas P. Mahoney, also Vice Pres., Regensteiner Corporation, 310 Racine Ave., Chicago 7; Exec. Secy., Pearl E. Oldt, Rm. 806, Transportation Bldg., 307 E. Fourth St., Cincinnati 2, O.; Conv. Chairman, Lee Augustine, also Vice Pres., The Printing Machinery Co., 136 Commercial Sq., Cincinnati 2, O.

Intl. Graphic Arts Education Assoc.—1955 Conv., Carnegie Institute of Technology, Pittsburgh, Pa. the first week in July. Pres., Kenneth R. Burchard, Asst. Dean, School of Printing Management, Carnegie Institute of Technology, Pittsburgh, Pa.; Exec. Secy., Samuel M. Burt, 719 Fifteenth St. N. W., Washington 5, D. C.

Intl. Typographic Composition Assoc. – 1954 Conv., Hotel LaSalle, Chicago, Sept. 23, 24, 25. Pres., Harold L. McGirr, Morris & Walsh Typesetting Co., Inc., 129 Lafayette St., New York, N. Y.; Frank M. Sherman, Exec. Dir., 1015 Chestnut St., Philadelphia 7.

Iowa Daily Newspaper Mechanical Conf. —Secy.-Treas., Paul F. Kamler, Mechanical Supt., Clinton (Ia.) *Herald.*

Kansas-Missouri Newspaper Mechanical Conf.—Kansas Pres., Howard Wilson, Jetmore (Kan.) *Republican* Secy-Treas., Larry Miller, Gen. Mgr., Kansas Press Assoc., 701 Jackson St., Topeka, Kan.; Missouri Pres., Louis N. Bowman, *Tri-County News,* King City, Mo.; Secy-Treas., William A. Bray, Missouri Press Association, 220 Walter Williams Hall, Columbia, Mo.; Supplymen's Committee Chairman, Clark O. Murray, Inland Newspaper Supply Co., 422 W. 8th St., Kansas City 5, Mo.

Lithographers National Assoc.—1955 Conv., Lake Placid Club, Lake Placid, N. Y., June 20-24. Pres., Carl R. Schmidt, Pres., Schmidt Lithograph Co., 461 Second St., San Francisco 7, Calif.; Exec. Dir., W. Floyd Maxwell, 420 Lexington Ave., New York 17, N. Y.

Mid-Atlantic Mechanical Conf. – 1955 Conf., Ambassador Hotel, Atlantic City, N. J., March 17, 18, 19. Jointly sponsored by the New Jersey Press Assoc. and the Pennsylvania Newspaper Publishers Assoc. Conf. Dir., Theodore A. Serrill, PNPA General Mgr., 304 Telegraph Bldg., Harrisburg, Pa.

National Assoc. of Litho Clubs – 1955 Conv. Milwaukee, Wis., May 5-7 (hotel to be announced later). Pres., Jack Blades, Washington, D. C.; Exec. Secy., Frank Mortimer, U. S. Government, Printing Office, Washington, D. C.

National Assoc. of Photo Lithographers– 1954 Conv., Hotel Statler, New York, N. Y., Sept. 22-25. Pres., A. J. Fay, 75 Varick St., New York 13, N. Y.; Exec. Vice Pres., Walter E. Soderstrom, 317 W. 45th St., New York 36, N. Y.

National Printing Equipment Assoc., Inc. Pres., Richard B. Tullis, Pres. Miller Printing Machinery Co., 1117 Reedsdale St., Pittsburgh 33, Pa.; Secy., James E. Bennet, 140 Nassau St., New York 38, N. Y.

National Safety Council Printing and Publishing Div. – 1954 meeting, Conrad Hilton Hotel, Chicago, Oct. 18-20. Gen. Chairman, Peter J. Bernard, Director of Personnel and Safety, H. Wolff Book Mfg. Co., 508 W. 26th St., New York 1,

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N. Y.; Staff Rep., Fred Lubet, National Safety Council, 425 N. Michigan Ave., Chicago 11.

New England Mechanical Conf. — 1954 Conf., Hotel Statler, Boston, Mass., Oct. 16-17. Pres., J. William Powers, Mech. Supt., Burlington (Vt.) *Free Press;* Secy.-Treas., Walter C. Crighton, Comp Room Supt., New London (Conn.) *Day.*

New York State Capital District Mechanical Conf.—1955 Conf., Hotel Ten Eyck, Albany, N. Y., Jan. 29, 30. Pres., Floyd Laurenty, Schenectady (N. Y.) *Union-Star;* Secy., Walter E. Lewis, Asst. Supt., Schenectady *Union-Star.*

Northwest Mechanical Conf.—Pres., William Benson, Pressroom Foreman, St. Paul (Minn.) *Pioneer Press* and *Dispatch;* Secy.-Treas., Ralph Carson, Dunwoody Industrial Institute, Minneapolis, Minn.

Pacific Mechanical Conf. — 1954 meeting, Multnomah Hotel, Portland, Ore., Sept. 17-19. Pres., Wm. E. Gibbons, Prod. Mgr., Portland (Ore.) *Journal;* Secy., Don Newhouse, Prod. Mgr., Portland (Ore.) *Oregonian;* Chairman Supplymen's Committee, Intertype Corp., Portland, Ore.

Printing Industry of America—1954 Conf., Hotel Statler, Detroit, Mich., Nov. 15-19. Pres., James J. Rudisill, Rudisill & Co., Lancaster, Pa.; Gen. Mgr., James R. Brackett, 719 Fifteenth St., N. W., Washington 5, D. C.

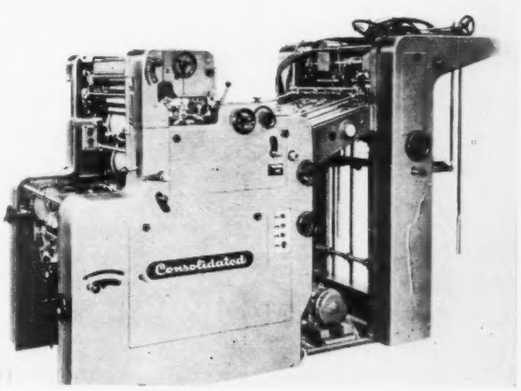
Research and Engineering Council of the Graphic Arts Industry, Inc.—1955 Meeting, Parker House, Boston, Mass., May 11, 12, 13. Pres., John H. Davis, jr., also Vice Pres. and Secy., Judd & Detweiler, Inc., Florida Ave. and Eckington Pl., N. E., Washington 2, D. C.; Managing Dir., Robert E. Rossell, 719 Fifteenth St., N. W., Washington 5, D. C.

Rocky Mountain Mechanical Conf.—1954 Conf. Albany Hotel, Denver, Colo., Oct. 1, 2, 3. Pres., Emory Cross, Scottsbluff (Nebr.) *Star-Herald.* Sponsored by Colorado Press Assoc.

Screen Process Printing Assoc. — 1954 Conv., Jefferson Hotel, St. Louis, Mo., Oct. 30-31, Nov. 1-2. Pres. Stanley R. Snider, Sniders' Poster Process Co., 2638 St. Louis St., New Orleans, La.; Exec. Secy., Robert H. Blundred, 549 W. Randolph St., Chicago 6. Conv. Committee Chairman, William Fraser, 1627 Locust St., St. Louis, Mo.

SNPA (Eastern Div.) Mechanical Conf.—1955 Conf., tentatively set for Hotel Roanoke, Roanoke, Va., Aug. 22, 23. Conf. Chairman, Boyce Brogden, Knoxville (Ky.) *News-Sentinel;* Secy., Ray B. Crow, Southern Newspaper Publishers Assoc., P. O. Box 1569, Chattanooga 1, Tenn.

The Filius Offset Press—Consolidated Intl. Equipment & Supply Co. announces availability of a high-speed Swiss Offset Press under the name Consolidated. The 16 in. by 20 in. Filius, it is reported, is rated at 8000 sheets per hr. on onion skin through cardboard up to 0.060 in. thick by cylinder impression adjustment. The inking system is of the varying type form roller construction and the dampening system by improved adjustable brush ductor roller to assure uniform water distribution. The high pile accommodates 48 in. of stock and the floor delivery accommodates 24 in. at the delivery end. An electronic and mechanical safety feeder device prevents the misfeeding of sheets and checks the sheets advancing in a stream. In the inking unit are 14 rollers of which 4 are form rollers of two different diameters. Consolidated Offset Presses are also available in sizes 18½ in. by 24¾ in.; 25 in. by 38 in., and 32 in. by 44 in. If additional information is desired, please mention PEE No. 240 in your request.



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SNPA (Western Div.) Mechanical Conf.—1955 Conf., Adolphus Hotel, Dallas, Tex., March 6-8. Conf. Chairman, Roscoe Ammonette, Marshall (Tex.) *News-Messenger;* Secy., Walter Johnson, jr., P. O. Box 1569, Chattanooga 1, Tenn.; Chairman, Supplymen's Committee, Eddie P. Gaughan, New England Fibre Blanket Co., 1225 S. Trenton Ave., Tulsa 10, Okla.

Technical Assoc. of the Graphic Arts — 1955 Conv., Somerset Hotel, Boston, Mass., May 9, 10, 11. Pres., G. L. Erikson, Braden-Sutphin Ink Co., 3800 Chester Ave., Cleveland 14; Secy.-Treas., George S. Hammer, 8 Cherry St., Marblehead, Mass.; Convention Chairman, Merrill Friend, Technical Director, Spaulding Moss Co., 113 Franklin St., Boston 10, Mass.

Phototypesetting

(Continued from Page 42)

tion and advertising. Warwick received more and more requests to plan jobs from layout to bindery, and more layout artists were added to the staff. Echele still manages to find time for an occasional assist.

Pursuing its original aim of high quality and customer satisfaction, Warwick is equipped with line casting machines, Monotypes, Ludlow, hand composition, and four Intertype Fotosetters, to cope with a wide variety of work.

Warwick Typographers constitutes a good case against the argument that there is a basic conflict between craftsmanship and the machine age. Echele puts it this way, "Our conventional typesetting equipment still accounts for a good share of our business, and we will continue to depend on it. But phototypesetting is the answer for many jobs. We're still proud of some of the work we did in our earliest days in 1922. But you've got to move with the times."

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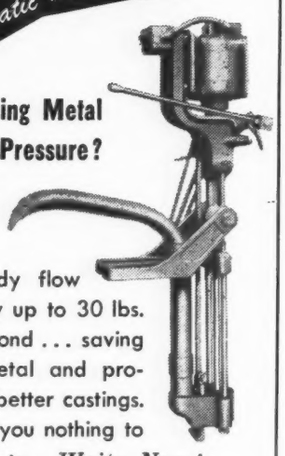
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NEWS ITEMS

With Linotype 25 Years—William Addison Dwiggins recently marked his 25th year of association with Mergenthaler Linotype Co. Jackson Burke, Linotype's Director of Typographic Development, presented Dwiggins with a 25-year service pin.

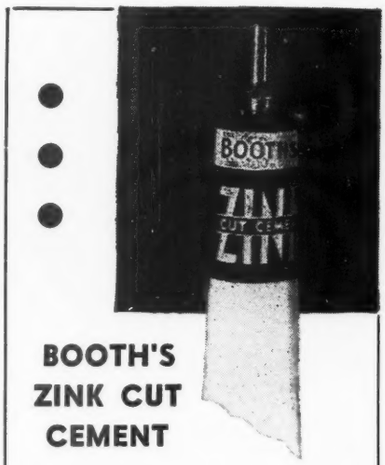
Tri Arts Press, Inc., is now located at 331 E. 38th St., New York 16, N. Y., it was announced recently. The organization's former address was 227 E. 45th St.

Bruno A. Borck Dies—Bruno A. Borck, 48, Mgr., Mergenthaler Linotype Co. Cleveland Agency, died July 20 in Dayton. A Chicago native, he joined Linotype's Chicago sales office in 1925. He became Chicago Service Manager in 1936 and Sales-Service Manager in 1949. In November, 1952, Borck was named manager of the Cleveland Agency. Services were held July 24 in Chicago.

William W. Scott Appointed — Lake Erie Engineering Corp. officials announce the appointment of William W. Scott to the Sales Dept. of their Printing Equipment Div. The appointment began July

Business Sold — The Zahn Typesetting Co. recently was sold to George A. Klicka, Fred J. Hill and Frank W. Hill, who are operating the business as Zahn-Klicka-Hill, Typographers. Announcement of the sale was made by Walter F. Zahn, former president of Zahn Typesetting Co., who recently retired.

Forms Phototypesetting Div. — A new division of the Intl. Typographic Composition Assoc. will be formally launched at a meeting of interested members during the ITCA convention, Hotel LaSalle, Chicago, Sept. 22-25. The new organization will be called the ITCA Phototypography Div. Since a number of ITCA members are engaged in phototypesetting activities, it is felt that the division will have a common interest to them in matters pertaining to development of this branch of the typographic art.



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Beveridge Dry Mats

1. Previously with the Greater Buffalo Press, Scott has served as stereotyper on daily papers. He is a member of Local 25 of the I. S. & E. Union (AFL). Scott obtained his B. S. degree from Canisius College and has done graduate work at the University of Buffalo. He is a World War II veteran.

Carnegie Scholarship — The Heathcote Mann Printing Scholarship, recently announced by Glen U. Cleeton, Dean of the School of Printing Management at Carnegie Institute of Technology, is available to students entering the School of Printing. The scholarship has been named for the late Heathcote (Hec) Mann, an employee of the Kable Bros. Co., Mount Morris, Ill., and since 1944 also head of his own layout and design firm, Mann Graphic Arts, in Mount Morris. The scholarship awards will be made to students entering Printing Management on the basis of evidence of outstanding ability and financial need. Two Mann Scholarship awards will be made in the amount of $350 yearly each, or a single award of $700 yearly, depending on the specific needs of each candidate. Addition of the Mann fund makes a total of 12 scholarships available to students in the Printing Management school. Information is available from Glen U. Cleeton, Dean, School of Printing Management, Carnegie Institute of Technology, Pittsburgh 13, Pa.

Absolute Monarch Gone

(Abstracted from an address given by John S. Williams, President, Williams & Marcus Co., Philadelphia, before the 35th Annual Convention of the Intl. Assoc. of Printing House Craftsmen, Philadelphia, August 1954)

LEADERSHIP today is different than it was many years ago. Today the absolute monarch is gone. The day of slave labor (except behind the Iron Curtain) is a thing of the past. Today we provide every possible opportunity for the comfort and health of our fellow workers because we realize that happy and contented people produce more and better products. The situation has greatly changed to a point where no one works for you any more —people work with you.

Program Completed by 2000th Pressman—Recently, the 2000th pressman to complete training in an Original Heidelberg Pressman's School program received his certificate. Bill Perkinson of American Life Insurance Co., Indianapolis, Ind. (second from left), is shown receiving his certificate from William Morganson, Heidelberg Eastern, Inc., representative (fourth from right), as Heidelberg School Instructor William McCabe (third from left) looks on. Also pictured are other members of the Indianapolis Pressmen's School. Courses have been held in over 25 cities by Heidelberg Eastern, Inc., in the last year. Duration of schools, which are scheduled on a rotation basis, depends upon the number of applications for admission. Invitations are sent to all pressmen in a given locale through their firms, and schools have been held from three to 10 weeks. Several months ago, the first permanent Original Heidelberg Pressmen's school completed one year of operation at the Los Angeles offices of Heidelberg Western Sales Co. The schools will be resumed in other cities in the autumn.

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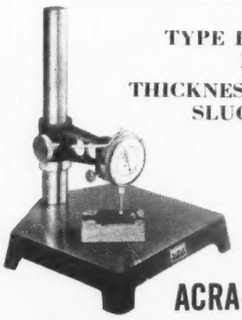

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DEPTH of routed, etched, cast or molded portions of PLATES, ENGRAVINGS, ELECTROS, PLASTIC or STEREO PLATES.

ACRA-CHEC CO. 850 Birnie Avenue West Springfield, Mass.

CROPLIS HUNDLEY BINK

ATF Regional Managers Louis A. Croplis, Edwin B. Hundley and Arthur R. Bink have been appointed regional managers of American Type Founders' New York, Cincinnati, O., and Atlanta, Ga., regions, respectively. The appointments began Aug. 1. Croplis previously managed the Cincinnati region, and, at the general office, was an outside salesman and held supervisory positions. He has been with ATF since 1923, and replaced Frank Shober, who retired after 18 years as New York regional manager. Hundley, former Atlanta regional manager, was responsible for ATF business expansion in that area. Bink has held various supervisory positions in the general office for over 20 years.

Jimmy Price of The Goss Printing Press Co., known for his work on flatbed presses, died on June 21 after a brief illness. He was 77.

Kiler, King Chosen—John Kiler has been chosen head of the Used Equipment Dept., Heidelberg Western Sales Co. He has been replaced as Heidelberg sales representative by R. B. King, who was formerly with Struthers-Wells Corp. and A. E. Poulson Co. Kiler will headquarter at the Los Angeles plant, 118 E. 12th St.

KILER KING

He succeeded Bill Silverman, who currently owns and manages Loewen Press in Los Angeles.

George Boyne has been appointed sales representative for Ideal Roller & Mfg. Co. in the Detroit area, it was announced recently. A Massachusetts native, Boyne attended the University of Boston. He also served in the U. S. Navy from 1944 to 1948. Boyne recently took a training program in the company's Chicago territory.

BOYNE

New England Printing Show — The Third New England Printing Machinery Show is to be held at the First Corps Cadet Armory, Boston, January 18-21, 1955. Sponsor of the event is the industry-wide committee of the Ninth Annual Printing & Publishing Week of New England. Robert B. Arbuckle, Wild & Stevens, Inc., is General Chairman of this committee. Co-chairmen who will direct planning for the show are Albin R. Johnson, Tileston & Hollingsworth Co., and Lew Powers, Interchemical Corporation, Printing Ink Div. It is planned to have working demonstrations and latest Graphic Arts equipment.

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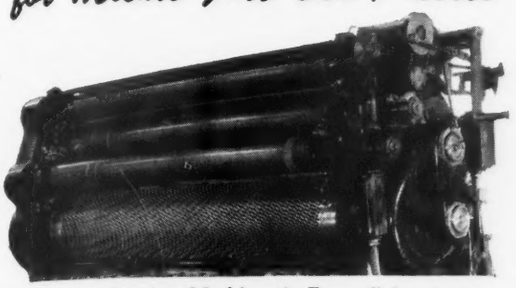

Western Printing Machinery's Extra Color Letterpress Unit for Miehle flat bed presses is the answer for low cost addition of third and fourth colors.

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This unit is low in cost and requires no additional floor space as it is mounted on top of the Miehle units. Operates efficiently and economically with the Miehle.

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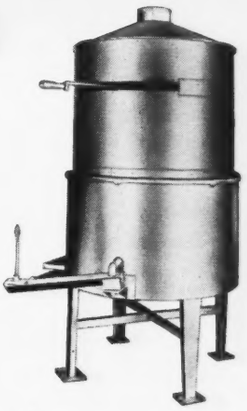

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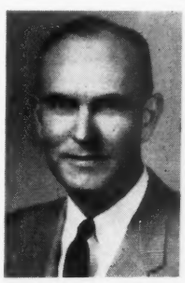
Goss Widow Passes—Mrs. Emily Ella Goss, widow of one of the three original Goss brothers who founded The Goss Printing Press Co., and mother of Vice Pres. William T. Goss, died July 18 in Chicago. Her husband, W. T. Goss, sr., had been superintendent of the Goss plant for many years.



McDOWELL

B. W. McDowell has been assigned sales representative for the northwest area of Miehle Printing Press & Mfg. Co., according to a recent announcement by Carlton Mellick, Vice Pres.-Sales. McDowell began his career in the printing industry at the age of 15. He spent several years with one of the larger printing firms in the San Francisco area, followed by approx. 10 years of operating his own print shop, the McDowell Printing Service, Watsonville, Calif. McDowell has established residence in Seattle, and will represent Miehle in Washington, Oregon, Idaho and Montana.

Paper Men Study at Carnegie—Riegel Paper Corp. recently sent nine of its employees to the School of Printing Management, Carnegie Institute of Technology, for a special course in printing processes. The six day course was designed to acquaint Riegel sales and manufacturing personnel with printing problems related to paper. The program of study was given by Carnegie faculty members.

Association Affiliates—Recently, the Chicago Typographers Assoc. became affiliated with the Graphic Arts Assoc. of Illinois, Inc. Arthur W. Brooks, Director of Technical and Educational Activities for the GAA, has been appointed secretary of the CTA. Its offices are in the GAA headquarters, 105 W. Monroe St., Chicago. The following typographers groups were previously members of both organizations: American Typesetting Corp., Commercial Typographers, Hellman's Typesetting Co., M&L Typesetting and Electrotyping Co., and Richards Typesetting and Printing Co. Chicago Typographers Assoc. members, now affiliated with GAA, include: A-1 Composition Co., Adcrafters, A&P Typographers, Dayanite Company, Dearborn Typesetting Co., Empire Typesetting Co., Keystone Typesetting Co., Kilgore Linotyping Co., Logan Square Typesetting Co., M&M Typesetters, New Era Typesetting Co., Paramount Typesetters, Peterson Typesetting Co., Reliance Typesetting Co., Trade Service Typesetting Co., Typo Service Co., and Wilcox Typesetting Co.

Iowa Newspaper Conference Officers—New officers of the Iowa Newspaper Mechanical Conference for 1954-55 elected at the recently held annual meeting in Clinton, Ia., are shown here. Front row, left to right: President, Bert DuSold, Mason City (Ia.) *Globe-Gazette;* and re-elected Secretary-Treasurer, Paul F. Kamler, Clinton (Ia.) *Herald.* Rear row, left to right: First Vice Pres., M. L. Dingman, Cedar Rapids (Ia.) *Gazette;* and Second Vice Pres., William D. McCauley, Mason City (Ia.) *Globe-Gazette.*

The occasion for the presentation of a traveling bag to Paul Kamler was the 25th anniversary of his election as Secretary-Treasurer of the Iowa Conference. John H. Notnam, General Mgr. of the Clinton (Ia.) *Herald*, made the presentation.

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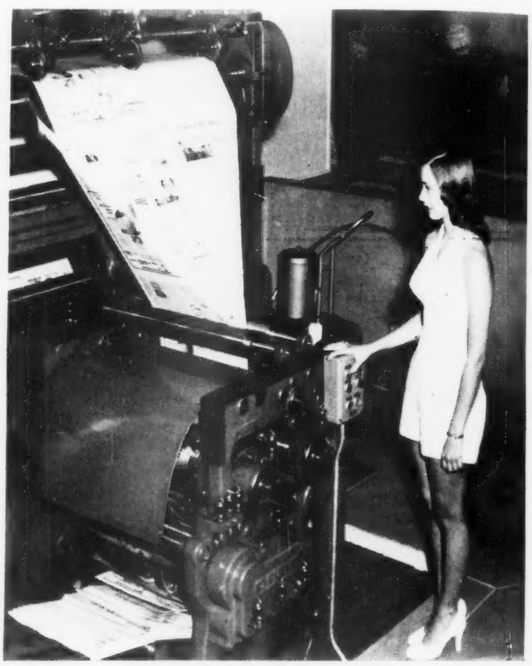
Named to Sales Staff—Robert E. Keyser, Edmund Fountaine and William J. Dooner have joined the sales staff of Sun Supply Corp. Div., Sun Chemical Corp. They will represent the corporation in the New York (N. Y.) metropolitan area. Keyser and Fountaine were formerly with the Special Products Div., Harris-Seybold Co. Keyser also was associated with Western Newspaper Union, Parsons & Whittemore Co., and Heidelberg Eastern, Inc. Fountaine, a graduate of St. Francis College, Brooklyn, N. Y., has done graduate work at City College of New York and Fordham University. He was also previously with Hall Brothers and the Davidson Corporation. Dooner was on the sales staff of Kerr Business Machinery Co., before joining Sun Supply Corp. Also, he was an employee of Procter & Gamble Co.

Hentschell Named Trustee—Charles J. Hentschell, St. Louis (Mo.) *Post-Dispatch* business Mgr., has recently been appointed a trustee of the Newspaper Trust under the will of Joseph Pulitzer, founder of the *Post-Dispatch* and the old New York (N. Y.) *World*, it has been announced. Hentschell will serve with the present Joseph Pulitzer, Herbert Pulitzer and Joseph Pulitzer, jr. The newspaper trust includes a majority of stock of the Pulitzer Publishing Co., publisher of the *Post-Dispatch*, and also the stock of the Press Publishing Co., former publisher of the *World*. Hentschell's appointment marked the first time in many years that a trustee has been appointed who is not a member of the Pulitzer family. The trust became operative after the death of the first Joseph Pulitzer (Oct. 29, 1911), and will continue during the lives of Joseph and Herbert Pulitzer. Under the newspaper trust are elected directors of the corporation. Directors operate the Pulitzer Publishing Co. Hentschell, *Post-Dispatch* Business Mgr. and member of the Pulitzer Publishing Co. since 1941, has been in the newspaper business since 1917.

Hentschell

Steinhauser Is Sales Manager—Lake Erie Engineering Corp. officials have named C. A. Steinhauser Sales Mgr. of the corporation's Printing Equipment Div. He will direct and coordinate the sales and sales promotion programs of the Division. Previously, he was Div. Sales Engineer, joining the corporation in that capacity in 1951. Steinhauser's engineering background includes education at Stevens Institute of Technology and the Dept. of Printing, Rochester Institute of Technology. A World War II veteran, Steinhauser had both domestic and overseas service with the U. S. Army Corps of Engineers.

Golden Jubilee Queen Starts New Press—Miss Yvonne Kulik, 17, hazel-eyed blonde queen of the Idaho city's Golden Jubilee, presses the starter button of the Twin Falls *Times-News'* brand new 24 page Goss Dek-A-Tube press. Selected on the basis of poise and personality as well as face and figure, Miss Kulik reigned over festivities lasting all summer. Soon after the Dek-A-Tube made its initial run, *The Times-News* produced an elaborate Golden Jubilee edition of 130 pages, crammed with photographs and containing 12 pages of color. The Twin Falls *Times-News* bears an unusual distinction among small dailies in that its circulation (just under 20,000) is larger than the city's population, estimated at 18,000. *The Times-News* serves a nine county area of irrigated farmland known as the Magic Valley. To give the best possible service to rural readers who receive their papers through the mail, *The Times-News* publishes a morning as well as an afternoon edition. *The Times-News* operates its own photoengraving plant, and runs a large number of pictures in every edition. The company also operates a well equipped commercial printing plant.



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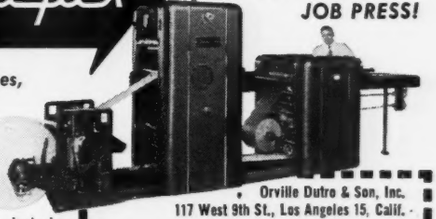

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CORLETT

Enlarge Goss' English Plant — The plant of Goss Printing Press Co., Ltd., in Preston, England, subsidiary of Goss Printing Press Co. of Chicago, is to be enlarged in the floor area by 50% with a corresponding increase in production facilities. R. C. Corlett, President of the parent company, is Chairman and Managing Director of the English firm. The project will be completed in about three years. The Preston plant produces the Goss Headliner newspaper presses and rotogravure presses. It also manufactures Miehle Vertical presses for Miehle Printing Press and Mfg. Co.'s European market. Approx. 550 workers are employed at Preston. Odhams, Ltd., Watford, England, which claims to have the largest rotogravure press installation in the world, operates 123 Goss press units and 13 folders. General Mgr. Alex McEwan has been elected a full director of Goss' English company. During a recent visit to Europe, Corlett visited the British Industries Fair and the Drupa Graphic Arts Exposition in Dusseldorf, Germany.

GUTHRIE

New Officers for Harris-Seybold (Canada) Ltd. — Election of Albert Guthrie as Vice Pres. and Resident Mgr. of Harris-Seybold (Canada) Ltd., has been announced by Ren R. Perry, Vice President-Sales for the parent firm, Harris-Seybold Co., Cleveland. Guthrie was elected to succeed Hedley Prout, who has retired after 42 years of service. Guthrie has been associated with the Graphic Arts equipment industry for 28 years. Another new officer of Harris-Seybold (Canada) Ltd. is Miss Marguerite McAvoy of Toronto, elected Asst. Secy.-Treas. Perry also announced that George S. Dively, Pres., Harris-Seybold (Canada) Ltd., has been named board chairman of the subsidiary; Joseph W. Powell, jr., Vice Pres.-Finance for Harris-Seybold, has become a director, and Perry has been elected president of the Canadian firm.

HAYWARD

Ideal Roller & Mfg. Co., officials announce appointment of James Hayward as sales representative in Florida. Hayward was co-owner of the Cordele (Ga.) *Daily Dispatch*. He has been in the Graphic Arts industry approx. 30 years, starting his career with Crowell Collier Publishing Co., Springfield, O. He was later made an instructor at Technical Trade School, Pressman's Home, Tenn. During World War II, he served in the U. S. Navy for three years. In 1945 he became associated with L. W. Bosart & Co., Springfield, O. Hayward resides at 2126 Hyde Park St., Sarasota, Fla.

ALNUTT

Alnutt Appointed— Officials of the Philip A. Hunt Co. have announced the appointment of Donald B. Alnutt as Director of Graphic Arts Research. Alnutt graduated from Central College, Fayette, Mo. He has worked with Mallinckrodt Chemical Works as a research chemist, and Fotte Mineral Co. in production of inorganic chemicals. Other recently employed personnel at Philip A. Hunt Co. include Thomas T. Hill, Director of Photographic Research, and Peter F. Mento, jr., Company Engineer.

Dayton (O.) Craftsman Club Past Presidents were honored recently at a meeting attended by Pearl E. Oldt, Exec. Secy., Intl. Assoc. of Printing House Craftsmen. Standing (left to right) are Past Presidents Robert Carpenter, Pres., Carpenter Lithographing Co., Springfield, O.; Walter Zopf, Pres., Dayton Process Engravers; Don Moon, in charge of Readers Digest contracts, McCall Corporation; Carl H. Harner, Composing Room Foreman, Egry Register Co.; Howard Randolph, Asst. Mgr., West Carrollton (O.) Parchment Co.; Loren Askins, Plant Mgr., Gebhardt Folding Box Co.; Gordon Ruiter, jr., Pressroom Supervisor, Standard Register Co., and Frank Voelkl, jr., Supt. of Forms Div., Standard Register Co. Oldt is seated between Carpenter and Zopf.

ADVERTISERS' INDEX SEPTEMBER 1954

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MELBURN O. SIMMONS, Mid-West Advertising Representative, 333 North Michigan Ave., Chicago 11, Ill. Phone DEarborn 2-6467.

GEORGE GELL, Central District Advertising Representative, 1276 West Third St., Cleveland 13, Ohio. Phone PRospect 1-0088.

Acra-Chee Co. 84
Alan Wood Steel Co. 30
American Evatype Corp. 12
American Publishers Supply, Inc. 74
American Roller Co. 61
American Type Founders, Inc. 33, 34, 35, 36
Ansco 20

Baum, Russell Ernest 81
Beckett Paper Co., The 6
Beveridge Paper Co., New Products Div. 83
Bingham's, Sam'l, Son Mfg. Co. 16
Booth, E. A., Rubber Co. 82
Burgess Cellulose Co. 70

Certified Dry Mat Corp. 81
Challenge Machinery Co. 69
Chandler & Price Co. 65
Clarity Company, The 79
Clark Equipment Co. 37
Cline Electric Mfg. Co. 13
Cottrell, C. B., & Sons Co. 22, 23
Craftsmen's Machinery Co. 78
Cutler-Hammer, Inc. 10, 11

Dexter Folder Co. 77
Dickerson, Robert W. 86
Doyle, The J. E., Co. 86
Dutro, Orville, & Son, Inc. 87

Eastern Newspaper Supply, Inc. 67
Economy Engineering Co. 73
Education Council, Graphic Arts Industry, Inc. 80
Electric Eye Equipment Co. 28

Goss Printing Press Co., The 18, 19
Graphic Arts Industry, Inc. 86
Graphic Arts Machinery, Inc. 87

Hamilton Mfg. Co. 62
Hammond Machinery Builders, Inc. ..... Inside back cover
Harris-Seybold Co. 44, 45
Heidelberg Automatic Presses 21
Hoe, R., & Co., Inc. 24, 25

Ideal Roller & Mfg. Co. 9
Imperial Type Metal Co. 66, 75
International Newspaper Supply Corp. 82
Intertype Corporation ..... Outside back cover

Kemp, The C. M., Mfg. Co. 73
Korthe Engineering Co. 86

Linotype Parts Co., Inc. ..... Inside front cover, 77
Ludlow Typograph Co. 7

Macbeth Arc Lamp Co. 73
Magnacraft Mfg. Co. 84
Main, Chas. T., Inc. 84
Martin, L. C., & Associates 32
Matrix Contrast Corp. 38
Mergenthaler Linotype Co. 59
Miehle Printing Press & Mfg. Co. 8
Miller Printing Machinery Co. 27
Minnesota Mining & Mfg. Co. 31
Morrison Company, The 3

National Bundle Tyer Co. 83
New England Newspaper Supply Co. 12
Nolan Corporation 14

Offen, B., & Co. 87

Richards, J. A., Co. 26
Rouse, H. B., & Co. 71

Scott, Walter, & Co., Inc. 2
Simco Company, The 84
Sta-Hi Corporation 1
Standard Process Corp. 14
Star Cement Co. 87
Statikil 82
Strong Electric Corp., The 15
Sun Supply Co., Div. of Sun Chemical Corp. 29
Surface Combustion Corp. 85

Timken Roller Bearing Co. 17
Tingue-Brown & Co. 68

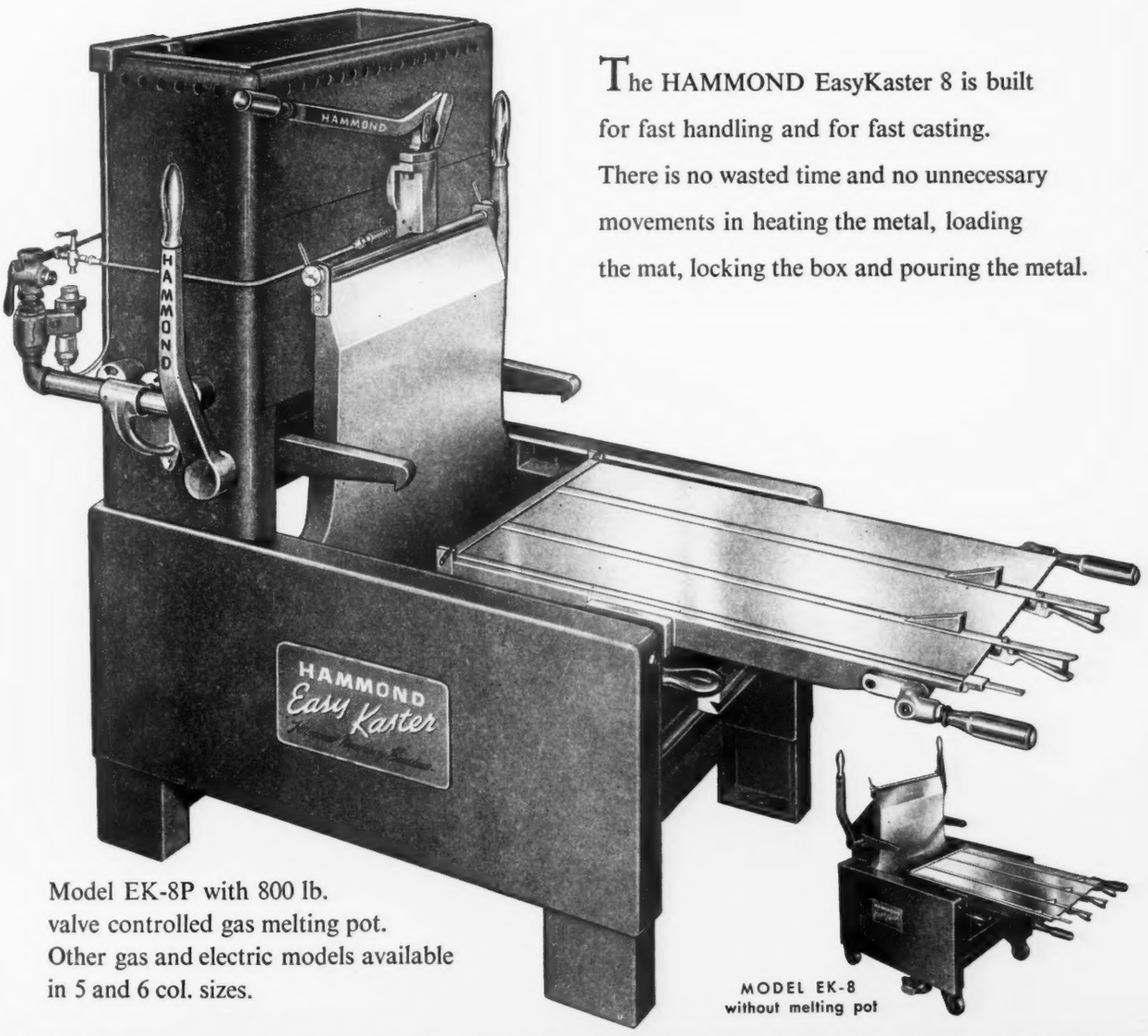
Vandercook & Sons, Inc. 87

Wells Mfg. Co. 64
Western Printing Machinery Co. 85
Wilson Steel & Wire Co. 75
Wood Flong Corp. 79
Wood Newspaper Machinery Corp. 4

GAS OR ELECTRIC 800 LB. CAPACITY VALVE CONTROL METALPOT • AUTOMATIC METAL TEMPERATURE CONTROL • BALANCED 4-POINT LOCK-UP • SMOOTH ROLLING BED

Hammond EasyKaster 8

The HAMMOND EasyKaster 8 is built for fast handling and for fast casting. There is no wasted time and no unnecessary movements in heating the metal, loading the mat, locking the box and pouring the metal.



Model EK-8P with 800 lb. valve controlled gas melting pot. Other gas and electric models available in 5 and 6 col. sizes.

MODEL EK-8
without melting pot

Hammond Machinery Builders INC.

1604 DOUGLAS AVENUE • KALAMAZOO, MICHIGAN

← 1. Original artist's layout

← 2. Ad is made up on clear acetate in positive form

See the many advantages of ad makeup with

Fotosetter *photographic type*

3. Negative for engraver, contact-printed from a made-up positive →

(1) MAXIMUM FLEXIBILITY—Composition set on the Intertype Fotosetter photographic line composing machine offers more flexibility in the use of white space—no spacing material, no furniture required in making up by this method.

(2) NO REPRODUCTION PROVING—Headlines and body copy are keyboarded on the Fotosetter machine and set directly on orthochromatic film or sensitized paper.

(3) NO MAKEREADY IS NEEDED—Reproductions of screen halftones and line illustrations on acetate are positioned over the layout. All type and artwork are on the same surface—there are no makeready problems.

(4) NO DARKROOM CAMERA IS NEEDED—Film negatives or positives for lithography, letterpress or gravure are made by a simple contact printing operation.

(5) TYPE STAYS SHARP—The sharpness of each Fotosetter character is held on the plate because of emulsion-to-emulsion contact, whether set on film or photographic paper.

(6) FITS NEW MAGNESIUM PLATEMAKING—This method fits in perfectly with rapid etching of magnesium.

(7) TOP QUALITY RESULTS—The metal plate produced by this method gives the printer full opportunity to achieve type of uniform color and unexcelled clarity.

If it isn't made by Intertype it isn't a Fotosetter

INTERTYPE CORPORATION

360 Furman Street, Brooklyn 1, New York • Chicago, San Francisco, Los Angeles, New Orleans, Boston
In Canada: Toronto Type Foundry Co. Ltd., Toronto, Montreal, Winnipeg, Vancouver, Halifax

FOTOSETTER is a registered trademark • Set in Baskerville and Futura families